Occupational Outlook Report

Santa Clara County 2002

A Product of:

The California Cooperative Occupational Information System (CCOIS)
(www.calmis.ca.gov)

Sponsored by:

NOVA
(www.novaworks.org)

The California Employment Development Department (EDD)
(www.edd.ca.gov)

EDD Employment Development Department
State of California

The California Career Resource Network (CalCRN)
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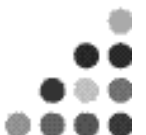
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Overview

The Santa Clara Occupational Outlook Report (OOR) is produced as part of a state-wide project called the California Cooperative Occupational Information System (CCOIS). The program is a cooperative effort between NOVA and the State of California Employment Development Department (EDD), Labor Market Information Division (LMID). It is an annual study conducted to improve the match between the labor needs of employers and the skills of job seekers by providing current, localized occupational information. Funding for this study is provided by EDD and NOVA.

NOVA

For 19 years, NOVA (www.novaworks.org) has built opportunities for workforce development in Silicon Valley. As a primary administrator of local employment and training funds, and an organization established to coordinate private and public efforts in that area, NOVA is in an ideal position to act as the coordinator of the local portion of the California Cooperative Occupational Information System.

NOVA was created under the Federal Job Training Partnership Act, which was replaced in 1998 by the Workforce Investment Act (WIA). The newly renamed NOVA Workforce Board, representing a substantial mix of companies, organizations, and communities in Silicon Valley, directs NOVA in offering a wide range of services to both job seekers and businesses.

The services provided by NOVA benefit both businesses and job seekers. Businesses can receive assistance with their hiring, retraining or outplacement needs through the newly created CONNECT! Business Service Center. CONNECT! is a collaborative of 33 partner agencies, including NOVA, that expands access to workforce services and provides all clients with a seamless one-stop system. Job seekers may receive vocational testing and counseling as well as assistance in obtaining the competitive skills necessary to enter the work force at the CONNECT! Job

Seeker Center. NOVA services go well beyond WIA and include such things as special projects for employee retraining, veterans, youth, other new entrants to the workforce. The NOVA Workforce Publications unit, in addition to completing the yearly CCOIS project, also completes a variety of industry-specific reports and special research projects as determined by funding and the Board.

Labor Market Information Division (LMID)

The CCOIS project is administered by LMID to encourage state and local cooperation in gathering, analyzing and distributing occupational information. LMID has access to an extensive state database from which to provide information and projections concerning local labor market conditions. LMID's expertise, technical assistance and database have all been made available to NOVA and, through this publication, are now being made available to you. The Project Methodology section describes the various tasks of NOVA and LMID in the survey process.

Uses of the Data

The data in this publication has been gathered, analyzed, and is distributed with the intention of being used by a variety of organizations and individuals for many different purposes. Some of the most important uses are listed below.

Career Decisions: The Occupational Tables have been specifically designed for use by career counselors and job seekers to provide easy-to-read local information on 26 occupations. The localized information includes employer requirements and preferences, wages, and labor supply and demand. It may help career counselors and job seekers make informed occupational choices based on skills, abilities, interests, education, and personal needs. In the "Description of Occupational Outlook Tables," each section of the table is defined. Suggestions for interpreting the data have been made in italics. It is hoped that this format will make it easier for career counselors to use this data effectively when working with clients.

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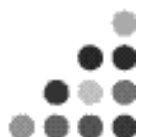
Introduction

Placement and Job Development: When job counselors and job developers are looking for appropriate placements for clients, the Occupational Outlook Tables can also be of help. Supply and demand information is provided to assist job seekers in making a decision as to whether a particular occupation is appropriate for their skills, abilities, education, and needs. The information may help the counselor and job seeker assess the job market and become more aware of the job skills which Santa Clara County employers rate as important for entry into the occupation. The information provided under the title "Where the Jobs Are" can guide the job seeker toward industries which are the largest sources of employment for that occupation.

Vocational Program Planning: The report provides local planners and administrators with employment data including occupational size and expected growth rates. Program planners can use this data to evaluate, improve, and eliminate programs, or to plan new programs. The Occupational Tables provide local planners with supply and demand, occupational size, and expected growth rate information. This section summarizes data collected from state tax records as well as a federal occupational survey and information collected directly from local employers. Multi-source information makes it possible to make more confident judgments concerning the suitability of occupations for training.

Economic Development: Local government agencies and economic development organizations will find information on the labor pool, such as occupational size, expected growth rates, and wages, which is useful in determining the potential for business growth and development in the Santa Clara County labor market area. Information on supply and demand, occupational size, growth rates, and wages and benefits can be used in establishing the suitability of Santa Clara County for specific types of business growth and development.

Curriculum Design and Program Marketing: Training providers can assess and update their curriculum based on current employer needs and projected trends as indicated in this report. They can also effectively market their programs by informing students, employers, and others that the chances for job placements are much greater because their programs are developed using reliable local information.

Human Resource Management: Both small business owners and large corporate human resource directors can use this report to determine competitive wages and benefits, improve their recruitment methods, and assess the availability of qualified workers for business relocation or expansion purposes.

It is hoped that this publication will meet the needs of its users. If you have any suggestions for improvement, please contact the: **NOVA Workforce Publications Team at (408) 730-7232 or email** publications@novaworks.org

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LMID developed Occupational Forecast Tables specifically for Santa Clara County (Appendix E). These tables provide 1999 employment information by occupation, projected over a seven-year growth period. Separation figures and occupational distribution by industry are also provided.

These tables contain information on over 400 occupations. They are generated using state unemployment insurance records of Santa Clara County businesses as well as the federally financed Occupational Employment Statistics (OES) survey of occupational distribution. Each occupation is identified according to Standard Industrial Classification (SIC) titles. The tables are an invaluable addition to the in-depth information provided in the OOR.

Occupational Selection Criteria

NOVA applied the following criteria to narrow the list of possible survey occupations to 27:

- The occupation must have a substantial employment base in the county;

- There must be a substantial number of projected job openings in the county;

- There appears to be present and future occupational growth;

- There appears to be a substantial potential for earning capacity;

- The training time required for the occupation must be two years or less, allowing for some exceptions based on the strength of the other criteria;

- The skills requirements are impacted by some fluctuation in the labor market or emerging technology.

Though NOVA surveyed a total of 27 occupations, results were found for only 26. As a result of the lack of employment in the occupation of Emergency Medical Technicians - 2 in Santa Clara County, this occupation was not included in the final report.

Survey Sample Selection

A preliminary list of occupations was developed. This list was reviewed by representatives from community-based vocational training programs, educational institutions, organized labor, economic development organizations, and the Workforce Board. From the input of these organizations, some occupations were eliminated and others added. A final list of occupations was then selected. Each occupation was clearly defined and an appropriate OES/DOT title was assigned. Based on the final sample, LMID developed an employer sample for each occupation. When drawing up the employer sample, the pattern of distribution of industries was considered. Industries are classified by the Standard Industrial Classification manual (after 2002, industries will be classified according to the new North American Industry Classification System). There are nine major industry groups, including:

- Agriculture, forestry, and fishing

- Mining

- Construction

- Manufacturing

- Transportation, communications, electric, gas, and sanitary services

- Wholesale trade

- Retail trade

- Finance, insurance, and real estate

- Public administration

LMID staff, using detailed databases on employers and occupational staffing within industries, chose a representative sample of employers for each of the occupations. For example, a medical assistant would generally work for a firm classified in the health services category, whereas a word processor may be scattered across several industries —health services, retail trade, manufacturing, etc. This was considered for each occupation when establishing the sample of employers that would receive questionnaires. If 20 percent of Santa Clara County workers in an occupation were found in a specific industry, then 20 percent of the sample was drawn from that industry.

The sample was carefully reviewed, and employers were called to verify company name and address, confirm the existence of the occupation at the company, and obtain the name of a contact person. Employers were added or deleted as appropriate. The final sample included up to 40 employers for each occupation.

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Project Methodology

Questionnaire Development

The same questions were asked for each of the 27 occupations (see Appendix F for a sample). Since the standard questionnaire did not contain a skills question, NOVA obtained that information from The Skill Matrix Network (www.skillmatrixnetwork.com). The Network is a new on-line information system designed for career seekers, employers, and all other individuals and organizations that need up-to-date information about occupations and skills.

The new O*NET-SOC classification system and O*NET (Occupational Information Network) database developed by the U.S. Dept. of Labor serves as the foundation for this website's occupation and skills database. The levels of education and training achievement were defined for the Skill Matrix Network using education levels previously defined by the U.S. Dept. of Labor (Bureau of Labor Statistics). However, in the context of the O*NET-SOC classification system, many of the occupations appeared to be identified with incorrect education levels. Therefore, each of the 900+ occupations in the database were analyzed again in order to determine the most accurate (most typical) education and training level. Additional sources for this analysis included the Occupational Outlook Handbook, America's Job Bank, and employer surveys by the Workforce Information Group, Inc.

Knowledge and skill information indicate the skills and other qualifications that are important to perform the duties for a given occupation. The importance level ratings for these occupational qualifications are based on O*NET's sliding scale of one to five that reflects a survey response range of "Not Important" to "Extremely Important" (as rated by incumbent workers or subject matter experts). For the purposes of this report, only skills and knowledge information given a rating of three or higher are shown. Definitions for each of the skills listed can be found in Appendix D. In the occupational tables, ratings are shown in the parentheses after each skill. Where appropriate, computer skills, which were obtained from the 2002 CCOIS survey results, were also listed.

Data Collection

Employers were contacted by phone and were given the opportunity to respond to the questionnaire at that time, or to return it by FAX or mail. Data collection began in June 2002 and was completed in November 2002. Additional employers were added to the original sample as necessary to ensure meeting a 50% response rate and to survey 40% of the sample's projected employment size.

All surveys were reviewed for accuracy of the data, and employers were re-contacted if answers were missing, unclear or conflicted with other data. In addition to contacting employers, NOVA staff, when necessary, contacted labor unions, employment agencies, and training providers to learn more about a specific occupation.

Tabulation: The survey responses were entered into a database and tabulations were prepared. From these tabulations, the data was analyzed and the final occupational summary reports were prepared by NOVA staff. Each occupational table provides information on training and hiring requirements, size of the occupation and expected growth rate, supply and demand assessment, major employment sources, and other information. Specific employer information is confidential and cannot be released.

Disclaimers

The wages included in this report are those paid by the employers participating in the survey for employees at three levels of experience. The report does not include extreme wages.

The Employment Development Department (EDD) does not endorse the schools listed in the California Training and Education Providers (CTEP) Directory. Please note that training programs may change frequently and we recommend contacting the schools to verify the information listed in the profile.

Description of Occupational Tables

Overview

The Occupational Tables (pages 1-52) present a summary of the project's findings by occupation. A separate table is presented for each of the 26 occupations for which surveys were completed. Major sections of each table include:

- Occupational Title and OES Code
  Occupational Definition

- Wages & Benefits
  – Wages
  – Benefits
  – Hours Worked
  – Shifts

- Employer Requirements
  – Education
  – Training & Experience
  – Skills, legally mandated requirements, and other requirements

- Projections
  – Forecast Levels
  – Employment Levels
      • Past 12 months
      • Next 24 months

- Supply & Demand
  – Difficulty in Finding Applicants
  – Recruitment Methods
  – Turnover

- Where the Jobs Are

- Size of Occupation
  – Range
  – Gender

- Training Providers

The following is a brief description of each section of the tables, definitions of terms relevant to the specific sections, and suggestions concerning how the information can be used effectively.

Occupations are listed alphabetically by their Occupational Employment Statistics (OES) titles. The titles and definitions are based on the OES dictionary published by the Bureau of Labor Statistics, October 1991.

Note: An OES code is not listed for the following occupations since they do not fit into any OES classifications: Software Engineers, Biotechnology Laboratory Assistants, Administrative Assistants, Human Resource Technicians, ESL (English As a Second Language) Teachers. These occupations were selected for the survey based on the needs of local users of occupational information.

Wages & Benefits
Wages
Wage data serves as a guide for comparing salaries of one occupation to those of another. The information helps ascertain the exact calculated salary ranges and median wages for each occupation. Where applicable, this information is provided for both union and non-union employees. All wages reflect responses given by employers surveyed.

Please note that this data is not meant to represent official prevailing wages and should be used (if at all) with caution for wage and salary administration. Wages are reported for three occupational levels as follows:

- **New Hires** – Wages generally paid to persons trained or qualified but with little or no paid experience in the occupation.

- **New Hires Who Are Experienced** – Starting wage generally paid to journey-level or experienced persons who are just starting at the firm.

- **Experienced Employees (3+years w/the firm)** – Wages generally paid to individuals with three years or more experience at the firm in that occupation.
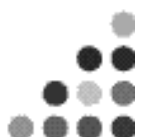
Description of Occupational Tables

Benefits
The benefits section identifies what percentage of the employers surveyed offer benefits to employees (both full-time and part-time where applicable) in the occupation. This section also indicates who pays for the benefits (e.g. employer pays all, employee pays all or both share the cost).

Note: Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision. Ranges are also considered to be representative.

Hours Worked
This section identifies typical working hours of employees in the occupation. More specifically, it shows how many hours per week an employee works on average.

Shifts Worked
This section identifies what shift the employees work in a given occupation (day, swing or graveyard).

Employer Requirements
Education
This section identifies the minimum level of formal education that firms require when hiring a candidate into the specific occupation. While minimum educational requirements have been shown as employers expressed them, these educational requirements are not always essential for the performance of job duties. Because the lack of education will create a barrier with some employers, employer's educational statements have been included in this report.

Training & Experience
Training: Generally refers to training as provided by Regional Occupational Programs, adult education, private vocational schools, state approved apprenticeship programs and community college training programs. Some occupations have legal or voluntary licensing, registration, or certification requirements which stipulate training or proficiency tests. Details are provided where applicable.

It should be noted that just meeting employer requirements may not be sufficient for employment. Often, the difference between obtaining employment for an inexperienced person is completion of the preferred levels of education and training. This is particularly true in occupations where supply exceeds demand and the inexperienced are competing with the experienced.

Experience: The type and amount of experience required by employers and areas in which employers look for experience is noted in this section. If training is an acceptable substitute for work experience, that is also noted.

This section provides a good indication of the degree of competition for jobs in the occupation. The more experience an employer requires, the stronger the competition and the harder it will be to enter the occupation with the proper qualifications but no experience.

Skills & Other Requirements
This section provides a summary of employer requirements and preferences in relation to the occupation. It is divided into three categories: Skills, Knowledge, and Computer Software Skills.

Note: With the passage of the Americans With Disabilities Act in 1990, employers must determine the "essential functions" of a position. The designation of a skill as "very important" or "important" is based upon employer preference. These terms are in no way meant to determine which skills are "essential functions" of the position. Employers will have to make that designation for each occupation at their firm. It is also important to note that although employers report their preferences as to physical skills, the Act also states that "reasonable accommodation" must be made for applicants and employees who have a disability. For more information about the Americans With Disabilities Act, contact NOVA at (408)730-7232.

Description of Occupational Tables

Projections

Forecast Level

This is a relative term relating to the rate of growth projected for the occupation from 1999-2006 in Santa Clara County. The Occupational Forecast Tables (Appendix F) provided by EDD/LMID show a growth projection for each occupation. These projections are evaluated against data collected from employers, and from trade associations, schools and industry analysis to provide a reasonable estimate of growth potential.

Projections are generally the numbers that are most relied upon to provide an indication of whether an occupation is expected to have high demand for new employment. Although it is a good starting point, other factors, such as separations, should be considered in attempting to determine the availability of job opportunities in an occupation.

The average projected growth for Santa Clara County is 19.1% during the seven year period of 1999-2006. Ranges have been established around the 19.1% average as follows:

- Much Faster   =   28.7% and above
  than Average
- Faster than Average =   21.0% - 28.6%
- Average   =   17.2% - 20.9%
- Slower than Average =   17.1% or less
- Remain Stable   =   no significant change
- Decline   =   negative percentage

Growth data can help determine if an occupation is likely to provide increasing or decreasing job opportunities in the future. Even in growing occupations however, the supply of qualified people could exceed the demand for a variety of reasons, including small occupational size, large numbers of people who already meet the occupational requirements, and/or large numbers of people being trained for that occupation.

Employment Levels
Past 12 Months
Next 24 Months

This chart reports how employers responded when asked whether employment in an occupation declined, remained stable, or grew during the last 12 months. Employers also responded as to whether they expect employment in an occupation to decline, remain stable or grow over the next 24 months.

Supply & Demand

Difficulty in Finding Applicants

Information in this section reports the level of difficulty employers have finding both inexperienced as well as fully experienced and qualified applicants. The terms used to describe the levels of difficulty employers have finding candidates are as follows:

Not Difficult—Supply of qualified applicants is considerably greater than demand, creating a very competitive job market for applicants.

Moderately Difficult—Demand is somewhat greater than the supply of qualified applicants. Employers may have some difficulty finding qualified applicants. Qualified applicants encounter little competition in their job search.

Very Difficult—Demand is considerably greater than supply of qualified applicants. Employers often cannot find qualified applicants when an opening exists. Qualified applicants encounter no competition in their job search.

Overall, this section provides the best current indication on the degree of ease or difficulty for a job seeker to obtain employment in the occupation. The information is not absolute, and it can change over time, but it provides a good tool in selecting an occupation for employment in the immediate future. Other factors, such as size of the occupation, projected growth, and separations (discussed in employment trends), should also be taken into consideration when deciding on the suitability of an occupation. In most cases, the most desirable occupations requiring the least training will be difficult to enter. Occupations that are easy to enter may have elements that are not attractive to the job seeker. Sometimes starting in an occupation considered less desirable will provide the job seeker with the experience required to enter a more desirable occupation at a later time.

Description of Occupational Tables

Recruitment Methods

This section lists the top recruiting methods the surveyed employers use when recruiting for the occupations.

Turnover

A comparison of the total number of employees in the occupation to vacancies filled resulting from promotions and employees leaving the firm in the past 12 months. For most occupations, more openings are the result of workers leaving the labor force (attrition) or changing occupations than of industry growth. Replacement openings are most numerous in occupations with relatively low training. The formula used to calculate annual turnover percentage is as follows:

$$\frac{\text{\# of promotions} + \text{\# of employees leaving firm}}{\text{total \# of employees in occupation} - \text{\# of new positions}}$$

Where The Jobs Are

This section provides a list of types of industries which are the largest sources of employment for the occupation in Santa Clara County. The titles are from the Standard Industrial Classification system, as used in the 1999-2006 Occupational Forecast Tables (Appendix F). This information is helpful to job seekers and job developers by identifying industries most likely to provide employment in the occupation. It is often recommended that job seekers contact employers within major employing industries in order to get more specific information for career planning.

Size of Occupation

Range

This is a relative term assigned to the number of people employed in the occupation as reported in "Annual Average 1999." The designation is different for each county and is based on the size of the work force in the county.

The range categories for Santa Clara County are converted to the relative term based on the following table:

- Small   = 1,457 or less
- Medium   = 1,458 – 2,914
- Large   = 2,915 – 6,313
- Very Large = 6,314 or more

The size of the occupation is important because it influences the availability of jobs. For instance, an occupation that is growing very slowly but is also very large could still be a good source of employment. Conversely, an occupation that is growing rapidly but is small in size may not provide good job opportunities at this time for significant numbers of people.

Gender

This section gives a percent breakdown of gender distribution in the particular occupation. It is stated as a percentage of the employees represented.

Training Providers

Appendix A provides a list of the Training Providers for each occupation.

Appendix B lists the Training Providers in alphabetical order with detailed information on the address and phone number. Appendix B can be used as a cross reference with Appendix A.

Occupational Tables

Accountants and Auditors

OES 211140

Accountants and Auditors examine, analyze, and interpret accounting records for the purpose of giving advice or preparing statements and installing or advising on systems of recording costs or other financial and budgetary data.

Wages & Benefits
Wages

Union and Non-Union

	Low	High	Median
New hires, no experience	$12.79	$17.26	**$15.03**
New hires, experienced	$12.79	$30.61	**$21.58**
3 years with firm, experienced	$17.05	$43.59	**$28.77**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	82%	18%	0%
Dental	65%	24%	0%
Vision	65%	6%	0%
Life	59%	0%	0%
Sick Leave	82%	18%	0%
Vacation	94%	0%	0%
Retirement	71%	12%	0%
Child Care	6%	0%	0%
Other	0%	0%	0%

Employer Requirements
Education

0%	Less than High School diploma
6%	High School diploma or equivalent
12%	Associate Degree (2yr)
76%	Bachlor Degree (4yr)
6%	Graduate Study
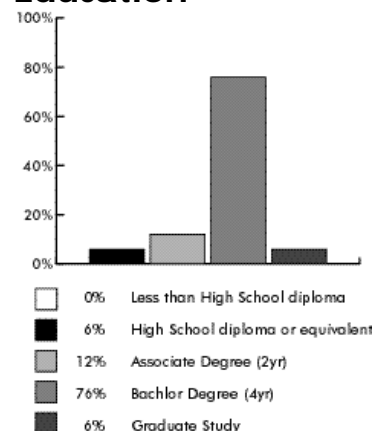
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	82%	6%	12%

Previous experience required: 31 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	13%	88%	0%

12 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 42 Hr. — Part-Time 26 Hr. — Temporary 10 Hr.

Work Shifts

Day | Swing

Skills & Other Requirements

Skills

Reading Comprehension (4.40)
Coordination (4.20)
Writing (4.20)
Complex Problem Solving (4.00)
Time Management (3.80)
Speaking (3.80)
Active Listening (3.60)
Monitoring (3.60)
Management of Material Resources (3.40)
Mathematics (3.40)
Management of Financial Resources (3.20)
Systems Evaluation (3.20)
Service Orientation (3.00)
Judgment and Decision Making (3.00)
Systems Analysis (3.00)
Social Perceptiveness (3.00)

Knowledge

Clerical (4.66)
Administration and Management (4.00)
Computers and Electronics (3.00)

Computer

Word Processing	S.A.P.
Spreadsheet	E.R.P.
Database	Lacert
Desktop	Quickbooks
Publishing	Ultra Tech

Projections

The projected growth for the period of 1999-2006 for **Accountants and Auditors** is 17.6% (average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	18%	82%	0%
Projected over the next 24 months	12%	41%	47%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced			X

Turnover (Annual percentage rate of job turnover) = 2.8%

Recruitment Methods

76%	Employee Referrals
59%	Internet
41%	Newspaper Ads
29%	Other = Word-of-Mouth, Networking, Client Referrals
24%	Private Employment Agencies
12%	Walk-in Applicants
6%	Colleges/Universities
6%	In-house Promotion or Transfer
6%	School, Program Referrals

Where the Jobs Are

- Accounting, Auditing, and Bookkeeping
- Colleges and Universities
- Computer and Data Processing Services
- Computer and Office Equipment
- Eating and Drinking Places
- Electronic Components and Accessories
- Electrical Goods
- Engineering and Architectural Service
- Federal Government
- Local Government, except Hospitals and Education
- Management and Public Relations
- Measuring and Controlling Devices
- Personnel Supply Services
- Professional and Commercial Equipment
- Radio, Television and Computer Store
- Research and Testing Services

Size of Occupation

Size as of 1999 = 9,310 (Very Large)

Gender

Male 37%   Female 63%

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Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.
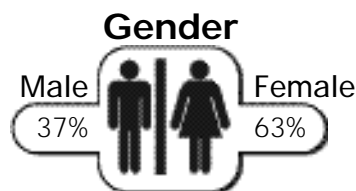
Administrative Assistants

Administrative Assistants aid executives by coordinating, analyzing, and improving office services, such as personnel, budget, and operating practices. They analyze personnel requirements, study methods of improving performance standards, and analyze jobs for wage-and-salary adjustments and promotions. They analyze budgetary requirements and expenditures, and study methods to implement cost reduction. They analyze operating practices and create new systems or revised established procedures to simplify and improve reporting procedures, work flow, record keeping systems, forms control, office layout, or suggestion systems. They interpret operating policies, prepare reports with recommendations for solutions of administrative problems, and answer correspondence. They may direct services, such as maintenance, repair, supplies, and mail.

Wages & Benefits
Wages

Union & Non-Union

	Low	High	Median
New hires, no experience	$12.00	$14.00	**$13.00**
New hires, experienced	$10.00	$23.97	**$17.00**
3 years with firm, experienced	$15.00	$27.70	**$23.97**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	73%	20%	0%
Dental	53%	20%	0%
Vision	53%	13%	0%
Life	60%	7%	0%
Sick Leave	80%	0%	7%
Vacation	80%	0%	7%
Retirement	53%	13%	0%
Child Care	0%	0%	0%
*Other	13%	0%	0%

*Stock Options

Employer Requirements
Education

0%	Less than High School diploma
67%	High School diploma or equivalent
33%	Associate Degree (2yr)
0%	Bachlor Degree (4yr)
0%	Graduate Study
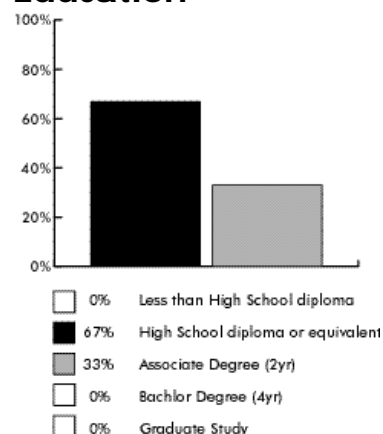
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	87%	13%	0%

Previous experience required: 22 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	23%	77%	0%

7 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 40 Hr. / Part Time 24 Hr.

Work Shifts

Day | Swing

3

Administrative Assistants

Skills & Other Requirements

Skills

Reading Comprehension (4.40)
Coordination (4.20)
Writing (4.20)
Complex Problem Solving (4.00)
Time Management (3.80)
Speaking (3.80)
Active Listening (3.60)
Monitoring (3.60)
Management of Material Resources (3.40)
Mathematics (3.40)
Management of Financial Resources (3.20)
Systems Evaluation (3.20)
Service Orientation (3.00)
Judgment and Decision Making (3.00)
Systems Analysis (3.00)
Social Perceptiveness (3.00)

Knowledge

Clerical (4.66)
Administration and Management (4.00)
Computers and Electronics (3.00)

Computer Skills

Word Processing
Spreadsheet
Database
Desktop Publishing

Projections

The projected growth for the period of 1999-2006 for **Administrative Assistants** is not available.

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	20%	47%	33%
Projected over the next 24 months	0%	80%	20%

Supply & Demand (difficulty in finding applicants)

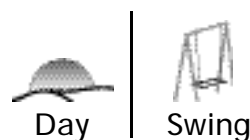|	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 8.1%

Recruitment Methods

80%	Internet
67%	Employee Referrals
53%	Newspaper Ads
33%	Other = Job Boards, Temp Agencies
27%	Private Employment Agencies
20%	Walk-In Applicants

Where the Jobs Are

- Computer and Computer Software Stores
- Computer Integrated Systems Design
- Computer Related Services, NEC
- Electronic Parts and Equipment, NEC
- Executive and Legislative Offices, Combined
- Help Supply Services
- Information Retrieval Services
- Prepackaged Software
- Real Estate Agents and Managers
- Testing Laboratories

Size of Occupation

Information not available.

Gender

Male 12%   Female 88%

4

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
Please see Appendix D for definitions of Skills & Other Requirements.

Santa Clara County 2002 Occupational Outlook Report
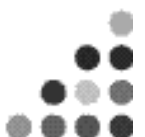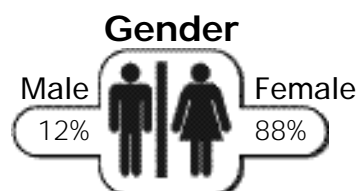
Administrative Services Managers   OES 130140

Administrative Services Managers plan, organize, direct, control, or coordinate the supportive services department of businesses, agencies,, and organizations. Typical Administrative Services Managers are Program Managers and Contract Administrators. Please do not include Procurement Managers or Managers who spend less than 80% of their time in administrative services.

Wages & Benefits
Wages

Non-Union

	Low	High	Median
New hires, no experience	$11.99	$14.00	$12.50
New hires, experienced	$12.00	$26.37	$17.05
3 years with firm, experienced	$14.00	$33.56	$20.46

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	80%	7%	7%
Dental	47%	20%	7%
Vision	27%	13%	13%
Life	47%	0%	7%
Sick Leave	80%	0%	0%
Vacation	93%	0%	0%
Retirement	33%	13%	33%
Child Care	0%	0%	0%
*Other	13%	0%	0%

*Flex Spending

Employer Requirements
Education
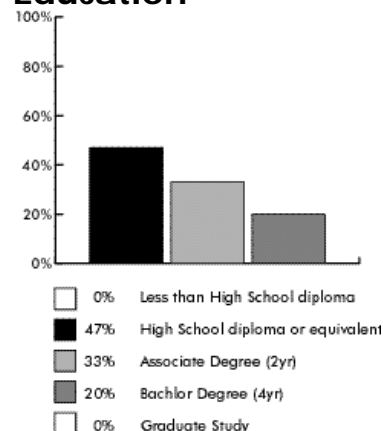
0%	Less than High School diploma
47%	High School diploma or equivalent
33%	Associate Degree (2yr)
20%	Bachlor Degree (4yr)
0%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	73%	13%	13%

Previous experience required: 38 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	31%	69%	0%

8 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time

45 Hr.

Work Shifts

Day

5
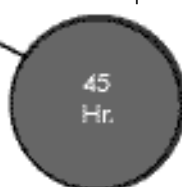
Administrative Services Managers

Skills & Other Requirements

Skills
Coordination (4.33)
Writing (4.33)
Management of Personnel Resources (4.16)
Judgment and Decision Making (4.16)
Reading Comprehension (4.00)
Time Management (3.83)
Speaking (3.83)
Complex Problem Solving (3.66)
Systems Evaluation (3.66)
Critical Thinking (3.66)
Systems Analysis (3.50)
Monitoring (3.33)
Mathematics (3.16)
Social Perceptiveness (3.16)
Operations Analysis (3.16)
Management of Financial Resources (3.16)
Active Learning (3.00)
Active Listening (3.00)
Instructing (3.00)

Knowledge
Administration and Management (4.83)
English Language (4.16)
Personnel and Human Resources (4.16)
Economics and Accounting (4.16)
Clerical (3.83)
Mathematics (3.50)
Education and Training (3.16)
Communications and Media (3.00)
Psychology (3.00)

Computer Skills
Word Processing	POS System
Spreadsheet	Sales Logix
Database	
Desktop Publishing	

Projections
The projected growth for the period of 1999-2006 for **Administrative Services Managers** is 21.4% (faster than average).

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	93%	7%
Projected over the next 24 months	0%	80%	20%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 14.3%

Recruitment Methods

67%	Employee Referrals
53%	Other = Colleagues, Craig's List site on the Internet, Head Hunters, Corporate Websites
40%	Internet
33%	Newspaper Ads
27%	Private Employment Agencies
7%	Walk In Applicants

Where the Jobs Are
- Colleges and Universities
- Computer and Data Processing Services
- Computer and Office Equipment
- Electronic Components and Accessories
- Engineering and Architectural Services
- Hospitals
- Legal Services
- Management and Public Relations
- Offices and Clinics of Dentists
- Offices and Clinics of Medical Doctors
- Professional and Commercial Equipment
- Research and Testing Services

Size of Occupation
Size as of 1999 = 3,930 (Large)

Gender
Male 20%   Female 80%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.
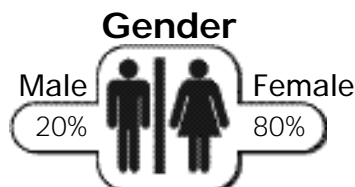
Biological Scientists

Biological Scientists are concerned with research into problems dealing with life processes. Please include Biologists, Biochemists, Biophysicists, Pathologists, Bacteriologists, Toxicologists, and Zoologists. Please do not include Medical and Agricultural Scientists.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$11.93	$26.37	**$16.78**
New hires, experienced	$12.79	$33.56	**$23.58**
3 years with firm, experienced	$14.92	$35.96	**$29.30**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

☐	0%	Less than High School diploma
☐	0%	High School diploma or equivalent
■	7%	Associate Degree (2yr)
▨	57%	Bachlor Degree (4yr)
▨	36%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	71%	29%	0%
Dental	64%	29%	0%
Vision	43%	21%	0%
Life	50%	7%	0%
Sick Leave	100%	0%	0%
Vacation	93%	7%	0%
Retirement	64%	14%	7%
Child Care	7%	7%	0%
*Other	7%	0%	0%

*Stock Options
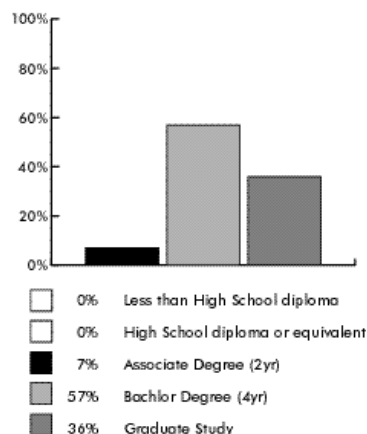
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	71%	21%	7%

Previous experience required: 43 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	18%	82%	0%

15 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Work Shifts

Day | Swing

7

Biological Scientists

Skills & Other Requirements

Skills
Science (5.00)
Complex Problem Solving (4.40)
Active Learning (4.40)
Critical Thinking (4.40)
Mathematics (4.40)
Writing (4.40)
Reading Comprehension (4.40)
Quality Control Analysis (3.60)
Equipment Selection (3.60)
Systems Evaluation (3.20)
Systems Analysis (3.00)
Judgment and Decision Making (3.00)
Monitoring (3.00)

Knowledge
Chemistry (5.00)
Biology (4.50)
Mathematics (3.66)

Computer Skills
Word Processing
Spreadsheets
Database
Desktop Publishing
PowerPoint

Projections
The projected growth for the period of 1999-2006 for **Biological Scientists** is 49.3% (much faster than average).

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	29%	43%	29%
Projected over the next 24 months	0%	43%	57%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified			X
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 13.7%

Recruitment Methods
64%   Employee Referrals
64%   Internet
36%   Newspaper Ads
21%   Other = Job Boards
14%   Colleges/Universities
14%   School, Program Referrals
14%   Trade Journals
 7%   In-house Promotion or Transfer

Where the Jobs Are
•Research and Testing Services

Size of Occupation
Size as of 1999 = 1,340 (Small)
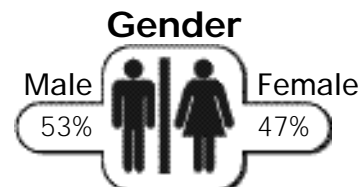
Gender
Male 53%   Female 47%

Biotechnology Laboratory Assistants

Biotechnology Laboratory Assistants prepare solutions and perform laboratory procedures under the direction of a research assistant or scientist. They may be responsible for a wide variety of research laboratory tasks and experiments. They may also be responsible for implanting analyses of raw materials, in-process inspections and quality control audits as well as the manufacture and packaging of products and the implementation of production procedures.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$7.50	$14.38	**$13.50**
New hires, experienced	$14.38	$21.58	**$19.00**
3 years with firm, experienced	$15.00	$28.77	**$23.97**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	69%	31%	0%
Dental	77%	15%	0%
Vision	46%	15%	0%
Life	38%	8%	0%
Sick Leave	92%	0%	0%
Vacation	100%	0%	0%
Retirement	46%	15%	23%
Child Care	0%	8%	0%
Other	0%	0%	0%

Employer Requirements
Education

0%	Less than High School diploma
31%	High School diploma or equivalent
8%	Associate Degree (2yr)
62%	Bachlor Degree (4yr)
0%	Graduate Study
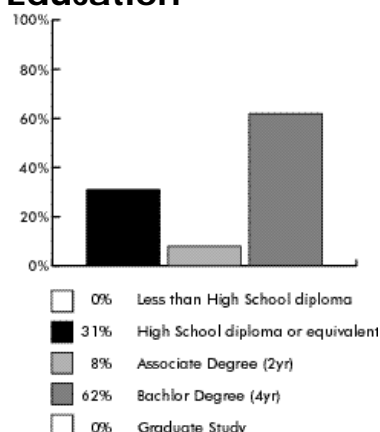
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	54%	23%	23%

Previous experience required: 18 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	70%	30%	0%

9 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 30-42 Hr. Part Time 24 Hr.
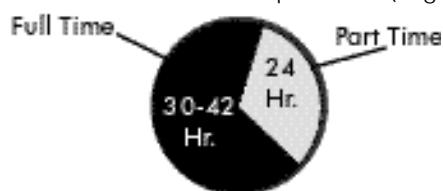
Work Shifts

Day

Biotechnology Laboratory Assistants

Skills & Other Requirements

Skills
Science (3.50)
Mathematics (3.33)
Complex Problem Solving (3.16)
Operation and Control (3.00)
Reading Comprehension (3.00)

Knowledge
Biology (4.83)
Mathematics (3.33)
Food Production (3.00)

Computer Skills
Word Processing
Spreadsheet
Database
Desktop Publishing
Sigma Plot
PowerPoint

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 16.0%

Recruitment Methods

69%	Employee Referrals
62%	Internet
54%	Colleges/Universities
23%	Newspaper Ads
8%	In-house Promotion or Transfer
8%	Other = Other Companies
8%	Private Employment Agencies
8%	School, Program Referrals
8%	Trade Journals

Where the Jobs Are

- Biological Products. Except Diagnostics Substances
- Commercial Physical and Biological Research
- General Medical and Surgical Hospitals
- Laboratory Analytical Instruments
- Non-commercial Research Organizations
- Testing Laboratories

Projections

The projected growth for the period of 1999-2006 for **Biotechnology Laboratory Assistants** is not available.

Size of Occupation

Information not available.

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	8%	46%	46%
Projected over the next 24 months	0%	38%	62%
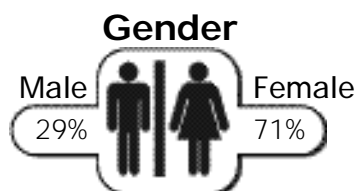
Gender

Male 29%   Female 71%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Bookkeeping, Accounting and Auditing Clerks, including Bookkeepers

Bookkeeping, Accounting and Auditing Clerks, including Bookkeepers, compute, classify, and record numerical data to keep sets of financial records complete. They perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. They may also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers. Please do not include individuals whose primary duty is operating special office machines.

Wages & Benefits
Wages

Union & Non-Union

	Low	High	**Median**
New hires, no experience	$8.00	$12.00	**$11.00**
New hires, experienced	$8.64	$23.97	**$15.00**
3 years with firm, experienced	$10.00	$30.00	**$19.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

■	7%	Less than High School diploma
▨	47%	High School diploma or equivalent
▨	27%	Associate Degree (2yr)
■	20%	Bachlor Degree (4yr)
□	0%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	47%	20%	0%
Dental	40%	13%	0%
Vision	40%	13%	0%
Life	33%	0%	0%
Sick Leave	53%	0%	0%
Vacation	67%	0%	0%
Retirement	33%	0%	7%
Child Care	0%	0%	0%
Other	0%	0%	0%
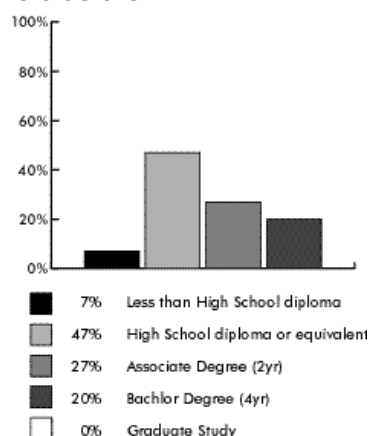
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	73%	13%	13%

Previous experience required: 28 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	38%	62%	0%

6 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Work Shifts

Day | Swing

11
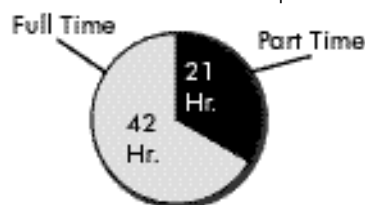
Bookkeeping, Accounting and Auditing Clerks, including Bookkeepers

Skills & Other Requirements

Skills
Mathematics (4.83)
Complex Problem Solving (4.00)
Writing (3.66)
Reading Comprehension (3.66)
Monitoring (3.16)
Quality Control Analysis (3.00)
Management of Financial Resources (3.00)

Knowledge
Economics and Accounting (4.83)
Clerical (4.66)
Mathematics (4.50)
English Language (3.66)
Computers and Electronics (3.33)
Law, Government and Jurisprudence (3.00)
Customer and Personal Service (3.00)

Computer Skills
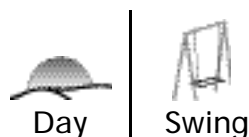Word Processing
Spreadsheet
Database
Desktop Publishing
Quicken
Quickbooks

Projections

The projected growth for the period of 1999-2006 for **Bookkeeping, Accounting, and Auditing Clerks, Including Bookkeepers** is 5.9% (slower than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	7%	80%	13%
Projected over the next 24 months	7%	47%	47%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced			X

Turnover (Annual percentage rate of job turnover) = 18.8%

Recruitment Methods

73%	Employee Referrals
47%	Other = Word-of-Mouth, Job Boards, other Company Referrals
33%	Newspaper Ads
27%	Walk-in Applicants
20%	Internet
20%	Private Employment Agencies
7%	Colleges/Universities
7%	School, Program Referrals

Where the Jobs Are

- Computer and Data Processing Services
- Eating and Drinking Places
- Electronic Components and Accessories
- Grocery Stores
- Legal Services
- Measuring and Controlling Devices
- Miscellaneous Business Services
- Personnel Supply Services
- Plumbing, Heating, Air-Conditioning
- Professional and Commercial Equipment
- Real Estate Agents and Managers

Size of Occupation

Size as of 1999 = 12,820 (Very Large)

Gender

Male 12%   Female 88%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County. See Appendix D for definitions of Skills & Other Requirements.
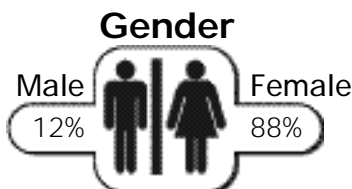
Cashiers

Cashiers receive and disburse cash payments, handle credit transactions, make change, issue receipts, and balance the tender drawer in a variety of establishments. Their work usually involves the use of adding machines, cash registers, and change makers.

Wages & Benefits
Wages

Union				Non-Union		
Low	High	**Median**		Low	High	**Median**
$6.75	$8.70	**$8.00**	New hires, no experience	$6.75	$8.00	**$7.50**
$8.00	$12.00	**$9.00**	New hires, experienced	$6.75	$9.00	**$7.75**
$10.50	$18.00	**$17.00**	3 years with firm, experienced	$7.50	$12.00	**$9.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

- ■ 44% Less than High School diploma
- ▨ 56% High School diploma or equivalent
- ☐ 0% Associate Degree (2yr)
- ☐ 0% Bachlor Degree (4yr)
- ☐ 0% Graduate Study
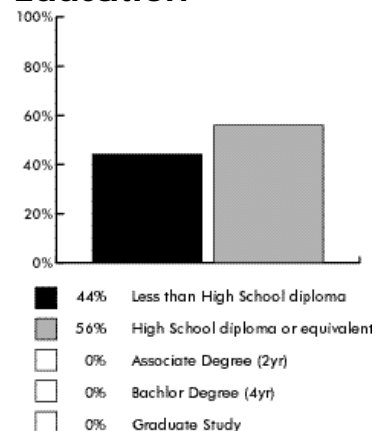
Benefits

	Employer Pays	Shared Cost	Employee Pays All
	f/t	f/t	f/t
Medical	50%	0%	0%
Dental	50%	0%	0%
Vision	44%	0%	0%
Life	38%	6%	0%
Sick Leave	50%	0%	0%
Vacation	69%	0%	0%
Retirement	56%	0%	0%
Child Care	6%	0%	0%
*Other	13%	0%	0%

*Discounts, Spending Account

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	31%	69%	0%

Previous experience required: 9 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	60%	40%	0%

1 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Work Shifts

Day | Swing

Graveyard

13
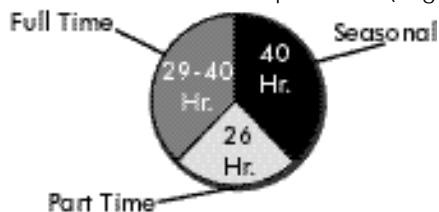
Skills & Other Requirements

Skills

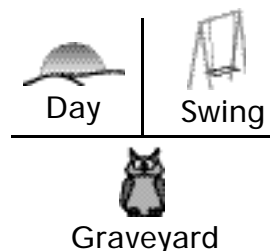Mathematics (4.16)
Service Orientation (3.83)
Speaking (3.66)
Social Perceptiveness (3.50)
Active Listening (3.16)

Knowledge

Customer and Personal Service (4.00)
Mathematics (3.66)
Clerical (3.66)
English Language (3.00)
Computers and Electronics (3.00)

Computer Skills

Cash Register
Scanning Software

Projections

The projected growth for the period of 1999-2006 for **Cashiers** is 21.3%
(faster than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	75%	25%
Projected over the next 24 months	0%	75%	25%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 57.7%

Recruitment Methods

50%	Walk-in Applicants
44%	In-house Promotion or Transfer
31%	Newspaper Ads
31%	Other = Job Boards
25%	Employee Referrals
19%	Internet
13%	School, Program Referrals
6%	Colleges/Universities

Where the Jobs Are

- Department Stores
- Drug Stores and Proprietary Stores
- Eating and Drinking Places
- Gasoline Service Stations
- Grocery Stores
- Lumber and Other Building Materials
- Miscellaneous Shopping Goods Stores

Size of Occupation

Size as of 1999 = 16,640 (Very Large)

Gender

Male 46% Female 54%

14

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County. See Appendix D for definitions of Skills & Other Requirements.
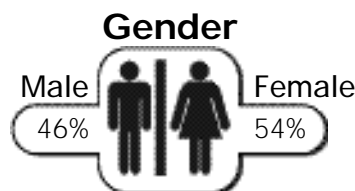
Computer Engineers

OES 221270

Computer Engineers analyze data processing requirements to plan EDP systems to provide system capabilities required for projected work loads. They plan layout and installation of new systems or modification of existing systems. They may set up and control analog or hybrid computer systems to solve scientific and engineering problems.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$0.00	$0.00	**$0.00**
New hires, experienced	$13.64	$47.95	**$24.93**
3 years with firm, experienced	$19.18	$71.92	**$33.56**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

0%	Less than High School diploma
0%	High School diploma or equivalent
13%	Associate Degree (2yr)
80%	Bachlor Degree (4yr)
7%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	87%	7%	0%
Dental	73%	7%	0%
Vision	53%	7%	0%
Life	60%	0%	0%
Sick Leave	80%	0%	0%
Vacation	87%	0%	0%
Retirement	40%	0%	20%
Child Care	7%	7%	0%
*Other	13%	0%	0%

*Long Term Disability, Stock Options
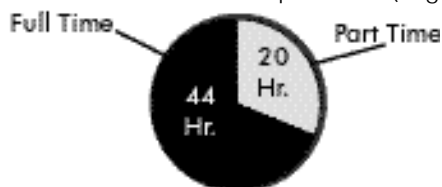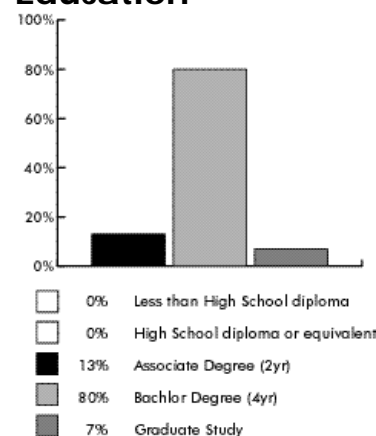
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	93%	0%	7%

Previous experience required: 35 mos. on average

	Yes	No	
Training as a substitute for experience	13%	87%	0%

3 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 44 Hr. — Part Time 20 Hr.

Work Shifts

Day | Swing
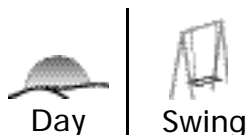
Skills & Other Requirements

Skills

Troubleshooting (4.66)
Programming (4.66)
Reading Comprehension (4.66)
Quality Control Analysis (4.50)
Operations Analysis (4.33)
Complex Problem Solving (4.33)
Writing (4.16)
Active Listening (3.83)
Critical Thinking (3.66)
Speaking (3.50)
Technology Design (3.50)
Judgment and Decision Making (3.50)
Systems Analysis (3.50)
Equipment Selection (3.33)
Systems Evaluation (3.16)
Active Learning (3.16)
Monitoring (3.00)
Learning Strategies (3.00)
Installation (3.00)
Mathematics (3.00)
Operation Monitoring (3.00)
Instructing (3.00)

Knowledge

Computers and Electronics (5.00)
English Language (4.00)
Education and Training (3.83)
Mathematics (3.66)
Customer and Personal Service (3.16)

Computer Skills

Word Processing
Spreadsheet
Database
Desktop Publishing

Projections

The projected growth for the period of 1999-2006 for **Computer Engineers** is 68.3% (much faster than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	47%	27%	27%
Projected over the next 24 months	13%	60%	27%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 4.7%

Recruitment Methods

87%	Internet
53%	Employee Referrals
47%	Other = Word-of-Mouth, Job Fair, Job Board, Sourcing, Email List, Associations
27%	Private Employment Agencies
20%	Colleges/Universities
20%	Newspaper Ads
7%	In-house Promotion or Transfer
7%	Walk-in Applicants

Where the Jobs Are

- Computer and Data Processing Services
- Guided Missiles, Space Vehicles Parts and Auxiliary Equipment
- Measuring and Controlling Devices

Size of Occupation

Size as of 1999 = 19,000 (Very Large)
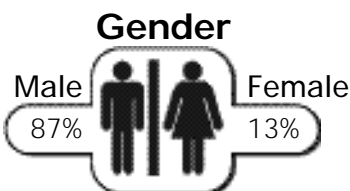
Gender

Male 87% Female 13%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County. See Appendix D for definitions of Skills & Other Requirements.

Cooks – Restaurant

OES 650260

Restaurant Cooks prepare, season, and cook soups, meats, vegetables, desserts, and other foodstuffs in restaurants. They may order supplies, keep records and accounts, price items on a menu, or plan the menu.

Wages & Benefits
Wages

Non-Union

	Low	High	Median
New hires, no experience	$6.75	$8.00	$8.00
New hires, experienced	$6.75	$10.00	$9.00
3 years with firm, experienced	$6.75	$15.00	$11.00

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

■	67%	Less than High School diploma
▨	33%	High School diploma or equivalent
☐	0%	Associate Degree (2yr)
☐	0%	Bachlor Degree (4yr)
☐	0%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	67%	7%	7%
Dental	67%	7%	7%
Vision	53%	7%	0%
Life	33%	0%	0%
Sick Leave	33%	0%	0%
Vacation	73%	7%	0%
Retirement	60%	0%	7%
Child Care	0%	0%	0%
Other	0%	0%	0%
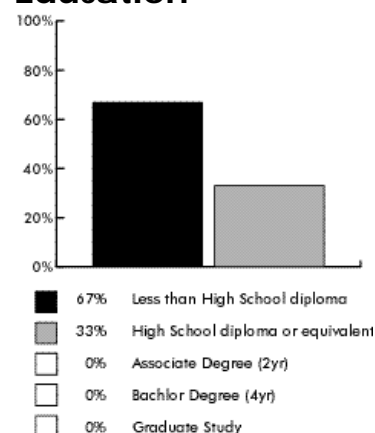
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	47%	27%	27%

Previous experience required: 11 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	73%	27%	0%

4 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time — 32-39 Hr.
Part Time — 27 Hr.

Work Shifts

Day | Swing
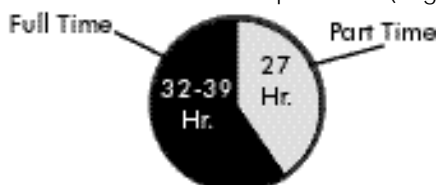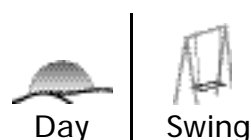
Cooks – Restaurant

Skills & Other Requirements

Skills
Quality Control Analysis (3.16)
Equipment Selection (3.16)
Monitoring (3.00)

Knowledge
Customer and Personal Service (4.50)
Mathematics (3.16)

Computer Skills
Word Processing
Spreadsheet
Execuchef

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 33.6%

Recruitment Methods

80%	Employee Referrals
60%	Other = Word-of-Mouth, Radio
47%	Newspaper Ads
47%	Walk-in Applicants
13%	Internet
7%	In-house Promotion or Transfer
7%	School, Program Referrals

Projections

The projected growth for the period of 1999-2006 for **Cooks–Restaurant** is 16.2% (slower than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	27%	53%	20%
Projected over the next 24 months	0%	47%	53%

Where the Jobs Are

- Eating and Drinking Places

Size of Occupation

Size as of 1999 = 5,750 (Large)

Gender

Male 93% | Female 7%
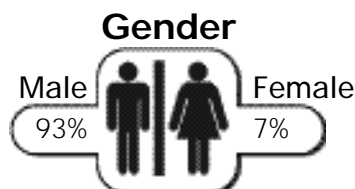
Electrical and Electronic Engineering Technicians and Technologists

OES 225050

Electrical and Electronic Engineering Technicians and Technologists apply electrical and electronic theory and related knowledge to design, build, test, repair, and modify developmental, experimental, or production electrical equipment in industrial or commercial plants for subsequent use by engineering personnel in making engineering design and evaluation decisions. Please do not include workers who only repair electronic equipment.

Wages & Benefits
Wages

Non-Union

	Low	High	Median
New hires, no experience	$6.75	$20.55	**$14.50**
New hires, experienced	$9.00	$28.77	**$17.59**
3 years with firm, experienced	$12.00	$33.56	**$21.79**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	94%	6%	0%
Dental	50%	6%	6%
Vision	50%	0%	13%
Life	31%	0%	0%
Sick Leave	94%	0%	0%
Vacation	100%	0%	0%
Retirement	31%	0%	19%
Child Care	6%	0%	0%
Other	0%	0%	0%
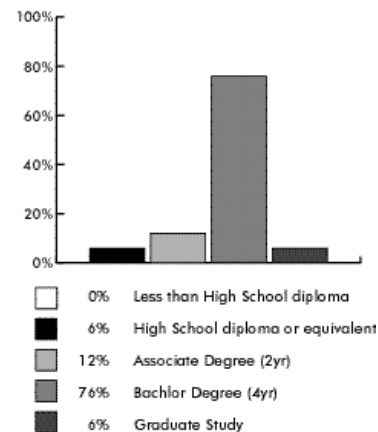
Employer Requirements
Education

☐	0%	Less than High School diploma
■	6%	High School diploma or equivalent
▨	12%	Associate Degree (2yr)
▨	76%	Bachlor Degree (4yr)
■	6%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	75%	6%	19%

Previous experience required: 29 mos. on average

|	Yes	No	Not Required but Preferred
Training as a substitute for experience	47%	53%	0%

12 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time

32-40 Hr.

Work Shifts

Day

19

Electrical and Electronic Engineering Technicians and Technologists

Skills & Other Requirements

Skills

Technology Design (4.00)
Complex Problem Solving (3.83)
Troubleshooting (3.83)
Active Learning (3.66)
Quality Control Analysis (3.50)
Critical Thinking (3.50)
Writing (3.50)
Reading Comprehension (3.50)
Equipment Selection (3.33)
Operations Analysis (3.33)
Mathematics (3.33)
Learning Strategies (3.00)
Science (3.00)

Knowledge

Engineering and Technology (4.66)
Mathematics (4.50)
Design (4.33)
Computers and Electronics (3.83)
Physics (3.16)

Computer Skills

Word Processing	Simulation
Spreadsheet	Programs
Database	CAD Design
Desktop	Graphics
Publishing	

Projections

The projected growth for the period of 1999-2006 for **Electrical and Electronic Engineering Technicians and Technologists** is 13.4% (slower than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	19%	56%	25%
Projected over the next 24 months	0%	31%	69%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 6.7%

Recruitment Methods

56%	Newspaper Ads
50%	Employee Referrals
50%	Internet
38%	Other = Word-of-Mouth, Company Web Page, Colleagues
19%	Private Employment Agencies
13%	Colleges/Universities
6%	Employment Development Department

Where the Jobs Are

- Computer and Data Processing Services
- Computer and Office Equipment
- Electronic Components and Accessories
- Electrical Goods
- Measuring and Controlling Devices
- Professional and Commercial Equipment

Size of Occupation

Size as of 1999 = 10,290 (Very Large)

Gender

Male 89% Female 11%

20

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.
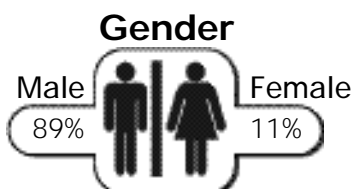
Electronic Semiconductor Processors   OES 929020

Electronic Semiconductor Processors process materials used in manufacture of electronic semiconductors. They load semiconductor material into furnace; saw formed ingots into segments; load individual segment into crystal growing chamber and monitor controls; locate crystal axis in ingot using x-ray equipment and saw ingots into wafers; clean, polish, and load wafers into series of special purpose furnaces, chemical baths, and equipment used to form circuitry and change conductive properties. They may scribe or separate wafer into dice.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$8.00	$19.18	**$12.00**
New hires, experienced	$10.00	$43.15	**$28.77**
3 years with firm, experienced	$14.00	$47.95	**$33.56**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

☐	0%	Less than High School diploma
■	38%	High School diploma or equivalent
☐	0%	Associate Degree (2yr)
▨	50%	Bachlor Degree (4yr)
▨	13%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	38%	63%	0%
Dental	38%	50%	6%
Vision	38%	44%	0%
Life	69%	19%	0%
Sick Leave	100%	0%	0%
Vacation	100%	0%	0%
Retirement	13%	38%	44%
Child Care	0%	0%	6%
*Other	31%	0%	0%

*Stock Options
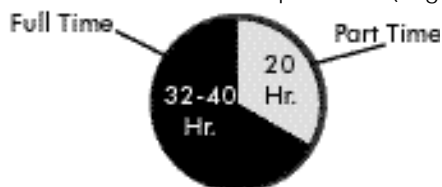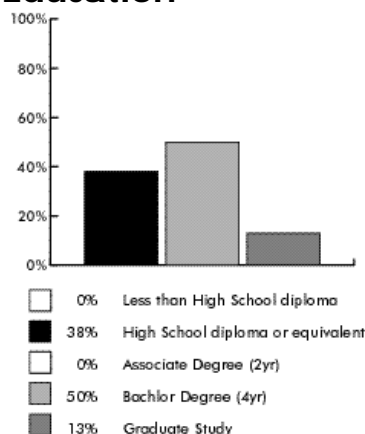
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	81%	13%	6%

Previous experience required: 39 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	14%	86%	0%

12 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time   Part Time
32-40 Hr.   20 Hr.

Work Shifts

Day | Swing

21
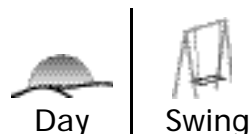
Electronic Semiconductor Processors

Skills & Other Requirements

Skills
Operation and Control (4.40)
Operation Monitoring (4.20)
Equipment Selection (3.80)
Science (3.80)
Quality Control Analysis (3.60)
Writing (3.40)
Reading Comprehension (3.40)
Mathematics (3.20)

Knowledge
Production and Processing (4.00)
Mathematics (3.16)

Computer Skills
Word Processing
Spreadsheets
Database
Desktop Publishing

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 4.3%

Recruitment Methods

100%	Employee Referrals
69%	Internet
38%	Newspaper Ads
13%	Private Employment Agencies
6%	Other = Career Fairs
6%	Walk-in Applicants

Where the Jobs Are

• Electronic Components and Accessories

Projections
The projected growth for the period of 1999-2006 for **Electronic Semiconductor Processors** is 18.2% (average).

Size of Occupation
Size as of 1999 = 6,990 (Very Large)

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	19%	25%	56%
Projected over the next 24 months	0%	44%	56%

Gender
Male 65% Female 35%

22
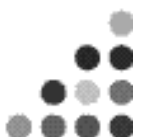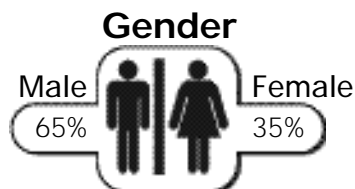
Emergency Medical Technicians - 1   OES 325081

Emergency Medical Technicians-1 are ambulance attendants or drivers who are trained and certified to provide emergency basic life support at the scene of an emergency and during ambulance transport to hospitals. Please do not include Firefighters trained as Emergency Medical Technicians-1.
(Projections for these three occupations are clumped into one for a generic EMT 325080)
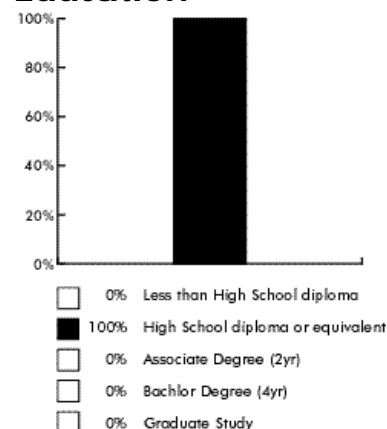
Wages & Benefits
Wages

Union				Non-Union		
Low	High	**Median**		Low	High	**Median**
$11.72	$11.72	**$11.72**	New hires, no experience	$9.00	$10.65	**$9.83**
$11.72	$11.72	**$11.72**	New hires, experienced	$9.00	$10.65	**$9.83**
$13.86	$13.86	**$13.86**	3 years with firm, experienced	$11.50	$14.65	**$13.08**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

0%	Less than High School diploma
100%	High School diploma or equivalent
0%	Associate Degree (2yr)
0%	Bachlor Degree (4yr)
0%	Graduate Study

Benefits

	Employer Pays	Shared Cost	Employee Pays All
	f/t	f/t	f/t
Medical	67%	33%	0%
Dental	33%	0%	33%
Vision	33%	0%	0%
Life	33%	0%	0%
Sick Leave	100%	0%	0%
Vacation	100%	0%	0%
Retirement	33%	67%	0%
Child Care	33%	0%	0%
Other	0%	0%	0%

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	0%	100%	0%

Previous experience required: 0 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	0%	0%	0%

0 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time: 45 Hr. Part Time: 16 Hr.

Work Shifts

Day | 24 Hour Shifts

Skills & Other Requirements

Skills

Coordination (4.50)
Complex Problem Solving (4.50)
Speaking (4.33)
Service Orientation (4.33)
Operation Monitoring (4.33)
Judgment and Decision Making (4.33)
Active Listening (4.16)
Operation and Control (4.00)
Equipment Selection (4.00)
Critical Thinking (4.00)
Systems Evaluation (3.83)
Equipment Maintenance (3.66)
Writing (3.66)
Social Perceptiveness (3.66)
Reading Comprehension (3.50)
Monitoring (3.50)
Active Learning (3.50)
Systems Analysis (3.16)

Knowledge

Medicine and Dentistry (4.83)
Therapy and Counseling (3.50)
Transportation (3.16)
Biology (3.16)
Telecommunications (3.00)

Computer Skills

Electronic Patient Data Collection

Projections

The projected growth for the period of 1999-2006 for **All Types of Emergency Medical Technicians** is 30.6% (much faster than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	0%	100%
Projected over the next 24 months	0%	33%	67%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified *			
Inexperienced		X	

*Employers surveyed do not require previous experience.

Turnover (Annual percentage rate of job turnover) = 8.5%

Recruitment Methods

67%	Newspaper Ads
67%	School, Program Referrals
33%	Colleges/Universities
33%	Employee Referrals
33%	Other = Word-of-Mouth

Where the Jobs Are

- Hospitals
- Local and Suburban Transportation

Size of Occupation

Size as of 1999 = 980* (Small)

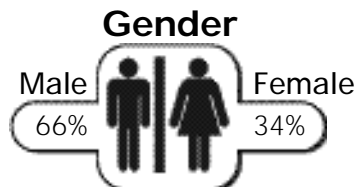*All Types of Emergency Medical Technicians

Gender

Male 66%   Female 34%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Emergency Medical Technicians - Paramedic

OES 325083

Emergency Medical Technicians-Paramedic are trained and certified to provide emergency advanced life support at the scene of an emergency and during ambulance transport to hospitals. Emergency Medical Technicians-Paramedic use a broad range of sophisticated life-saving equipment and techniques, including specified drugs. Please do not include Firefighters trained as Paramedics.
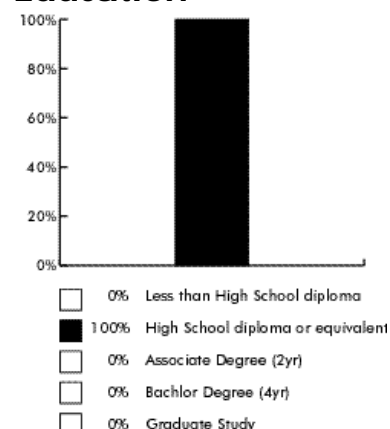
Wages & Benefits
Wages

Union				Non-Union		
Low	High	**Median**		Low	High	**Median**
$14.01	$14.01	**$14.01**	New hires, no experience	$16.51	$16.51	**$16.51**
$14.01	$14.01	**$14.01**	New hires, experienced	$17.31	$17.31	**$17.31**
$16.12	$16.12	**$16.12**	3 years with firm, experienced	$21.31	$21.31	**$21.31**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

- ☐ 0% Less than High School diploma
- ■ 100% High School diploma or equivalent
- ☐ 0% Associate Degree (2yr)
- ☐ 0% Bachlor Degree (4yr)
- ☐ 0% Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	100%	0%	0%
Dental	50%	0%	0%
Vision	50%	0%	0%
Life	50%	0%	0%
Sick Leave	100%	0%	0%
Vacation	100%	0%	0%
Retirement	50%	50%	0%
Child Care	50%	0%	0%
Other	0%	0%	0%

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	0%	100%	0%

Previous experience required: 0 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	0%	0%	0%

0 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 53 Hr. — Part Time 23 Hr.

Work Shifts

24 Hour Shifts

25

Emergency Medical Technicians-Paramedic

Skills & Other Requirements

Skills
Coordination (4.50)
Complex Problem Solving (4.50)
Speaking (4.33)
Service Orientation (4.33)
Operation Monitoring (4.33)
Judgment and Decision Making (4.33)
Active Listening (4.16)
Operation and Control (4.00)
Equipment Selection (4.00)
Critical Thinking (4.00)
Systems Evaluation (3.83)
Equipment Maintenance (3.66)
Writing (3.66)
Social Perceptiveness (3.66)
Reading Comprehension (3.50)
Monitoring (3.50)
Active Learning (3.50)
Systems Analysis (3.16)

Knowledge
Medicine and Dentistry (4.83)
Therapy and Counseling (3.50)
Transportation (3.16)
Biology (3.16)
Telecommunications (3.00)

Computer Skills
Word Processing
Spreadsheet
Electronic Patient Data Collection

Projections
The projected growth for the period of 1999-2006 for **All Types of Emergency Medical Technicians** is 30.6% (much faster than average).

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	0%	100%
Projected over the next 24 months	0%	0%	100%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified *			
Inexperienced			X

*Employers surveyed do not require previous experience.

Turnover (Annual percentage rate of job turnover) = 28.3%

Recruitment Methods
100%   School, Program Referrals
50%   Employee Referrals
50%   Newspaper Ads
50%   Other = Word-of-Mouth
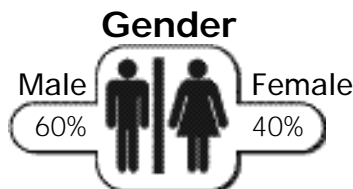
Where the Jobs Are
• Local and Suburban Transportation
• Hospitals

Size of Occupation
Size as of 1999 = 980* (Small)

*All Types of Emergency Medical Technicians

Gender
Male 60%   Female 40%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

(ESL) English as a Second Language Teachers

Non-OES 313990999

ESL (English as a Second Language) Teachers teach students basic English skills, including, reading, writing, listening, and conversation in a classroom setting. They teach in public and private elementary and secondary schools. ESL Teachers teach in English and are not required to be proficient in the languages of the students they teach. As with most teaching positions, ESL teachers must create lesson plans, prepare and grade examinations, keep records, and work with students, parents, and other personnel. This occupation excludes Multilingual Resource Specialists and Bilingual Teachers.

Wages & Benefits
Wages

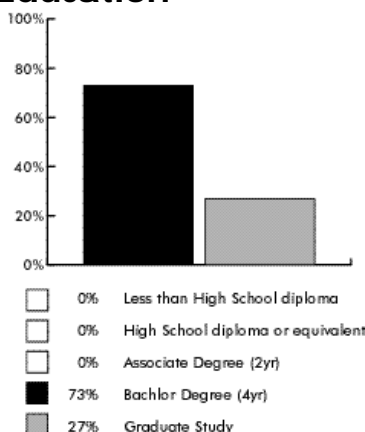|	Union				Non-Union		
	Low	High	**Median**		Low	High	**Median**
New hires, no experience	$19.01	$56.50	**$26.12**		$21.58	$21.58	**$21.58**
New hires, experienced	$19.01	$62.31	**$26.21**		$13.04	$21.58	**$19.90**
3 years with firm, experienced	$20.75	$67.76	**$26.62**		$13.04	$24.93	**$20.38**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	82%	9%	0%
Dental	73%	9%	0%
Vision	73%	9%	0%
Life	55%	18%	0%
Sick Leave	91%	0%	0%
Vacation	27%	0%	0%
Retirement	64%	9%	0%
Child Care	9%	9%	0%
Other	0%	0%	0%

Hours Worked per week (avg.)

Full Time 22-38 Hr. / Part Time 19 Hr.

Employer Requirements
Education

0%	Less than High School diploma
0%	High School diploma or equivalent
0%	Associate Degree (2yr)
73%	Bachlor Degree (4yr)
27%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	36%	45%	18%

Previous experience required: 22 mos. on average

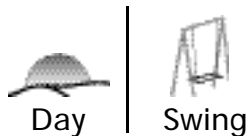|	Yes	No	Not Required but Preferred
Training as a substitute for experience	17%	83%	0%

12 mos. of training on average can be substituted for experience.

Work Shifts

Day | Swing

(ESL) English as a Second Language Teachers

Skills & Other Requirements

Skills
Speaking (4.83)
Instructing (4.83)
Learning Strategies (4.66)
Reading Comprehension (4.33)
Social Perceptiveness (4.16)
Active Listening (4.16)
Mathematics (4.00)
Monitoring (4.00)
Complex Problem Solving (4.00)
Writing (3.83)
Service Orientation (3.66)
Active Learning (3.66)
Time Management (3.66)
Critical Thinking (3.50)
Quality Control Analysis (3.33)
Equipment Selection (3.33)
Operations Analysis (3.16)
Judgment and Decision Making (3.16)
Management of Personnel Resources (3.00)
Coordination (3.00)

Knowledge
Education and Training (5.00)
English Language (4.16)
Therapy and Counseling (3.16)
Mathematics (3.16)

Computer Skills
Word Processing
Spreadsheet
Database
Desktop Publishing
Grading Programs

Projections

The projected growth for the period of 1999-2006 for **English as a Second Language (ESL) Teachers** is not available.

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	73%	27%
Projected over the next 24 months	9%	45%	45%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 12.7%

Recruitment Methods

55%	Internet
55%	Other = Word-of-Mouth, ESL Organizations, Job Fairs, EdJoin, Publications, County Office
36%	Employee Referrals
36%	Newspaper Ads
36%	School, Program Referrals
18%	Colleges/Universities
18%	In-house Promotion or Transfer
9%	Private Employment Agencies
9%	Trade Journals

Where the Jobs Are

• Elementary and Secondary Schools

Size of Occupation

Information not available.

Gender

Male 16% Female 84%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.
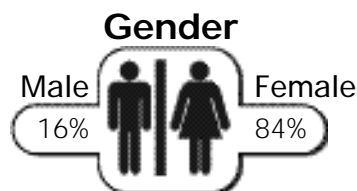
Financial Managers

OES 130020

Financial Managers plan, organize, direct, control, or coordinate the financial activities of an organization. Please include managers in banks or similar financial institutions who advise on credit and investment policy or negotiate general policy with financial or other institutions.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$0.00	$0.00	**$0.00**
New hires, experienced	$16.64	$43.84	**$29.97**
3 years with firm, experienced	$21.90	$57.53	**$34.76**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

☐	0% Less than High School diploma
☐	0% High School diploma or equivalent
☐	0% Associate Degree (2yr)
■	94% Bachlor Degree (4yr)
▨	6% Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	94%	6%	0%
Dental	94%	6%	0%
Vision	88%	13%	0%
Life	69%	6%	0%
Sick Leave	94%	0%	0%
Vacation	94%	0%	0%
Retirement	50%	25%	6%
Child Care	19%	13%	0%
*Other	6%	0%	0%

*Stock Options
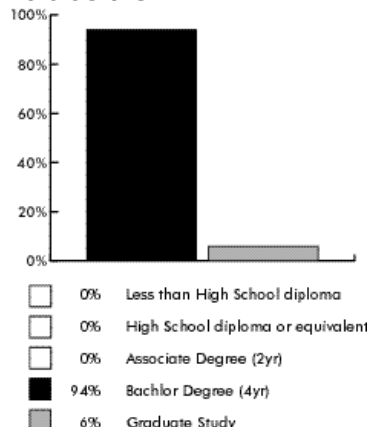
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	94%	0%	6%

Previous experience required: 59 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	13%	88%	0%

20 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time

42 Hr.

Work Shifts

Day

Skills & Other Requirements

Skills
Judgment and Decision Making (4.50)
Critical Thinking (4.50)
Coordination (4.33)
Complex Problem Solving (4.33)
Management of Financial Resources (4.33)
Reading Comprehension (4.33)
Writing (4.16)
Speaking (4.16)
Systems Evaluation (4.16)
Management of Personnel Resources (4.00)
Mathematics (4.00)
Active Learning (3.83)
Monitoring (3.83)
Systems Analysis (3.83)
Time Management (3.66)
Active Listening (3.66)
Operations Analysis (3.16)
Social Perceptiveness (3.00)

Knowledge
Economics and Accounting (4.83)
Administration and Management (4.66)
Mathematics (4.50)
English Language (3.66)
Law, Government and Jurisprudence (3.50)
Personnel and Human Resources (3.00)

Computer Skills

Word Processing	ACT
Spreadsheet	Smart Manager
Database	Peachtree
Desktop Publishing	Quickbooks
SAP	

Projections

The projected growth for the period of 1999-2006 for **Financial Managers** is 13.7% (slower than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	13%	69%	19%
Projected over the next 24 months	6%	75%	19%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced			X

Turnover (Annual percentage rate of job turnover) = 15.8%

Recruitment Methods

69%	Newspaper Ads
56%	Employee Referrals
50%	Internet
25%	Private Employment Agencies
19%	Other = Executive Search, Networking
13%	Walk-in Applicants
6%	Trade Journals

Where the Jobs Are

- Accounting, Auditing, and Bookkeeping
- Computer and Data Processing Services
- Electronic Components and Accessories
- Measuring and Controlling Devices
- Special Industry Machinery

Size of Occupation

Size as of 1999 = 5,920 (Large)
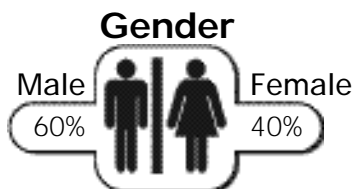
Gender

Male 60%   Female 40%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Firefighters

Firefighters control and extinguish fires, protect life and property, and maintain equipment as paid volunteers or employees of city, township, State, or Federal government.

Wages & Benefits
Wages

Union

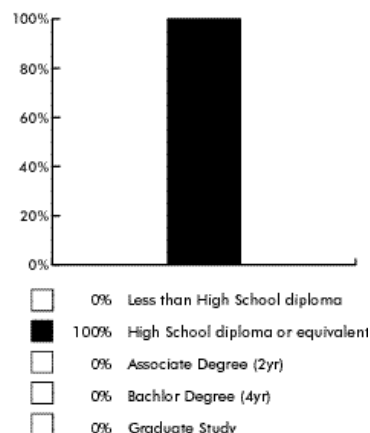|	Low	High	**Median**
New hires, no experience	$14.38	$26.71	**$19.88**
New hires, experienced	$13.06	$27.95	**$21.81**
3 years with firm, experienced	$17.99	$29.47	**$24.15**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	88%	13%	0%
Dental	88%	13%	0%
Vision	75%	13%	0%
Life	88%	13%	0%
Sick Leave	100%	0%	0%
Vacation	100%	0%	0%
Retirement	88%	13%	0%
Child Care	0%	0%	0%
Other	0%	0%	0%

Employer Requirements
Education

0%	Less than High School diploma
100%	High School diploma or equivalent
0%	Associate Degree (2yr)
0%	Bachlor Degree (4yr)
0%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	25%	63%	13%

Previous experience required: 14 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	67%	33%	0%

8 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time

56 Hr.

Work Shifts

24 Hour Shifts

Skills & Other Requirements

Knowledge
Public Safety and Security (4.60)
Medicine and Dentistry (3.80)
Transportation (3.60)
Therapy and Counseling (3.20)
Mechanical (3.20)
Geography (3.00)

Skills
Equipment Maintenance (4.66)
Coordination (4.66)
Operation and Control (4.50)
Equipment Selection (4.50)
Judgment and Decision Making (4.33)
Critical Thinking (4.33)
Complex Problem Solving (4.33)
Service Orientation (4.33)
Systems Evaluation (4.00)
Active Listening (4.00)
Troubleshooting (3.83)
Quality Control

Analysis (3.83)
Systems Analysis (3.83)
Learning Strategies (3.66)
Active Learning (3.66)
Monitoring (3.50)
Reading Comprehension (3.33)
Operation Monitoring (3.33)
Speaking (3.33)
Repairing (3.16)
Science (3.00)
Social Perceptiveness (3.00)
Technology Design (3.00)
Management of Material Resources (3.00)
Management of Personnel Resources (3.00)
Operations Analysis (3.00)

Computer Skills
Word Processing
Spreadsheet
Database

Projections

The projected growth for the period of 1999-2006 for **Firefighters** is 12.4% (slower than average).

Employment Levels
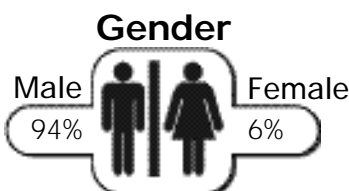
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	88%	13%
Projected over the next 24 months	0%	50%	50%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified	X		
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 8.0%

Recruitment Methods

63%	Employee Referrals
50%	Colleges/Universities
38%	Internet
38%	Other = Paramedic Program, Consortium, Volunteers
25%	Newspaper Ads
13%	In-house Promotion or Transfer
13%	Union Hall Referrals
13%	Walk-in Applicants

Where the Jobs Are

•Local Government, Except Hospitals and Education

Size of Occupation

Size as of 1999 = 2,420 (Medium)

Gender

Male 94% Female 6%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Guards and Watch Guards

OES 630470

Guards and Watch Guards stand guard at entrance gates or walk about premises of business or industrial establishments or private residences to prevent theft, violence, or infractions of rules; they guard property against fire, theft, vandalism, and illegal entry; they direct patrons or employees and answer questions relative to services of establishments. They control traffic to and from buildings and grounds.
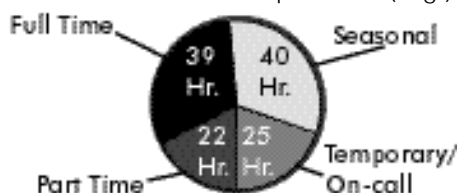
Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$7.00	$12.00	**$9.00**
New hires, experienced	$7.75	$14.00	**$10.00**
3 years with firm, experienced	$7.75	$16.00	**$12.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).
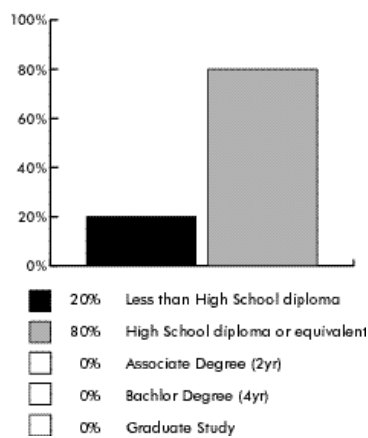
Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	87%	7%	0%
Dental	73%	7%	0%
Vision	67%	7%	0%
Life	47%	0%	7%
Sick Leave	47%	0%	0%
Vacation	73%	0%	0%
Retirement	47%	7%	0%
Child Care	7%	0%	0%
Other	0%	0%	0%

Hours Worked per week (avg.)

Full Time 39 Hr. — Seasonal 40 Hr. — Part Time 22 Hr. — 25 Hr. — Temporary/On-call

Employer Requirements
Education

20%	Less than High School diploma
80%	High School diploma or equivalent
0%	Associate Degree (2yr)
0%	Bachlor Degree (4yr)
0%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	13%	67%	20%

Previous experience required: 7 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	100%	0%	0%

3 mos. of training on average can be substituted for experience.

Work Shifts

Day | Swing

Graveyard

Guards and Watch Guards

Skills & Other Requirements

Skills
Complex Problem Solving (4.16)
Social Perceptiveness (3.83)
Speaking (3.83)
Active Listening (3.66)
Judgment and Decision Making (3.33)
Critical Thinking (3.33)
Writing (3.16)

Knowledge
Public Safety and Security (4.66)
Law, Government and Jurisprudence (3.50)
English Language (3.33)
Customer and Personal Service (3.16)
Telecommunications (3.00)

Computer Skills
Word Processing
Spreadsheet
Security Systems
Alarm Access Program

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 55.5%

Recruitment Methods

67%	Employee Referrals
67%	Newspaper Ads
53%	Other = Word-of-Mouth, Job Fairs, Job Boards, Employment Guide, NOVA Youth Office
47%	Internet
33%	Walk-in Applicants
13%	Colleges/Universities
7%	Employment Development Department
7%	In-house Promotion or Transfer

Where the Jobs Are

• Miscellaneous Business Services

Projections

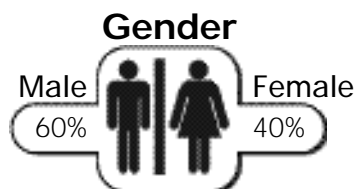The projected growth for the period of 1999-2006 for **Guards and Watch Guards** is 19.2% (remain stable).

Size of Occupation

Size as of 1999 = 6,310 (Large)

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	13%	87%
Projected over the next 24 months	7%	13%	80%

Gender

Male 60%   Female 40%

Human Resource Technicians   Non-OES 166267999

Human Resource Technicians provide assistance to personnel directors and managers in identifying, evaluating, and resolving human relations and work performance problems within establishments. Workers in this occupation attend meetings of managers, supervisors, and work units to ascertain problems that adversely effect employee morale and productivity and to determine effective redemption techniques, such as job skill training or personal intervention; develop and conduct training to instruct managers, supervisors, and workers in a variety of related skills, such as supervisory skills, conflict resolution skills, interpersonal communication skills, and group interaction skills; schedule individuals for technical job-related skills training. May assist in screening applicants for employment and in-house training programs, participate in labor relations issues, and write employee newsletter.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$9.00	$18.18	**$14.38**
New hires, experienced	$12.00	$38.36	**$21.96**
3 years with firm, experienced	$15.00	$45.55	**$30.50**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).
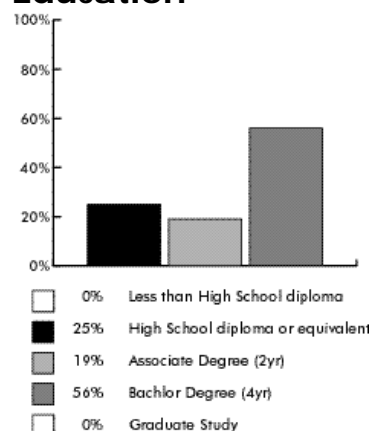
Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	88%	13%	0%
Dental	81%	13%	0%
Vision	69%	13%	6%
Life	88%	6%	0%
Sick Leave	88%	0%	0%
Vacation	100%	0%	0%
Retirement	31%	31%	25%
Child Care	0%	0%	6%
*Other	13%	0%	0%

*Education Allowance, Profit Sharing

Employer Requirements
Education

□	0%	Less than High School diploma
■	25%	High School diploma or equivalent
▨	19%	Associate Degree (2yr)
▨	56%	Bachlor Degree (4yr)
□	0%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	81%	0%	19%

Previous experience required: 33 mos. on average

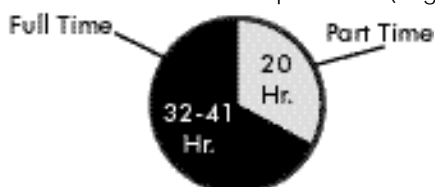|	Yes	No	
Training as a substitute for experience	38%	63%	0%

15 mos. of training on average can be substituted for experience.

Work Shifts

Day

Hours Worked per week (avg.)

Full Time · Part Time
20 Hr.
32-41 Hr.

Human Resource Technicians

Skills & Other Requirements

Skills
Reading Comprehension (4.40)
Complex Problem Solving (4.20)
Speaking (4.20)
Writing (3.80)
Active Listening (3.80)
Management of Personnel Resources (3.40)
Programming (3.00)

Knowledge
Personnel and Human Resources (4.66)
Clerical (4.66)
English Language (3.33)
Mathematics (3.16)
Computers and Electronics (3.16)

Computer Skills
Word Processing
Spreadsheet
Database
Desktop Publishing
Power Point
Quickbooks

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified	X		
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 7.5%

Recruitment Methods

63%	Employee Referrals
56%	Newspaper Ads
50%	Internet
44%	Other = Headhunters, HR.org listing on the Internet, Word-of-Mouth, Job Fairs, Networking
38%	Private Employment Agencies
13%	In-house Promotion or Transfer
6%	Employment Development Department
6%	Walk-in Applicants

Where the Jobs Are

- Coating, Engraving, and allied Services, NEC
- Communications Equipment, NEC
- Computer and Computer Software Stores
- Computer Programming Services
- Computer Related Services, NEC
- Offices and Clinics of Doctors of Medicine
- Plumbing, Heating, and air-conditioning
- Semiconductors and Related Devices

Size of Occupation
Information not available.

Projections
The projected growth for the period of 1999-2006 for **Human Resource Technicians** is not available.

Employment Levels
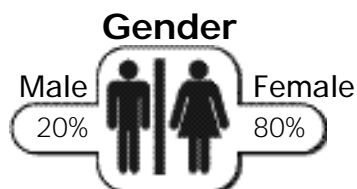Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	38%	56%	6%
Projected over the next 24 months	6%	44%	50%

Gender
Male 20%   Female 80%

36

Maids and Housekeeping Cleaners

OES 670020

Maids and Housekeeping Cleaners perform any combination of tasks to maintain rooms in commercial establishments, such as hotels, restaurants and hospitals, in a clean and orderly condition. Their duties include making beds, replenishing linens, cleaning rooms and halls, and arranging furniture.
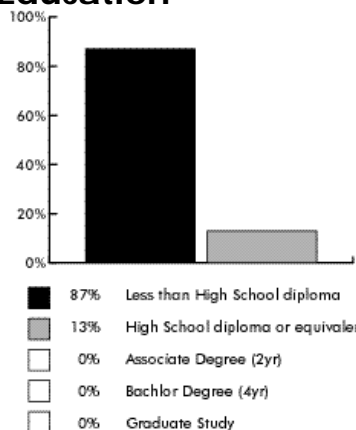
Wages & Benefits
Wages

	Union				Non-Union		
	Low	High	**Median**		Low	High	**Median**
New hires, no experience	$9.08	$10.00	**$9.54**		$6.75	$8.00	**$7.00**
New hires, experienced	$9.00	$10.00	**$9.08**		$6.75	$8.50	**$7.50**
3 years with firm, experienced	$9.00	$10.00	**$9.08**		$8.00	$12.00	**$9.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

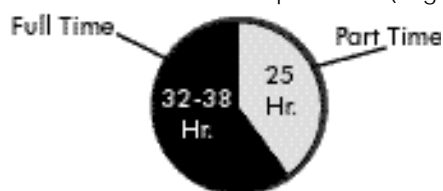## Employer Requirements
Education

■	87%	Less than High School diploma
▨	13%	High School diploma or equivalent
☐	0%	Associate Degree (2yr)
☐	0%	Bachlor Degree (4yr)
☐	0%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	33%	27%	7%
Dental	20%	20%	7%
Vision	20%	13%	7%
Life	13%	0%	0%
Sick Leave	40%	0%	0%
Vacation	60%	0%	0%
Retirement	20%	13%	0%
Child Care	7%	0%	0%
Other	0%	0%	0%

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	27%	53%	20%

Previous experience required: 5 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	86%	14%	0%

3 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time · Part Time · 32-38 Hr. · 25 Hr.

Work Shifts

Day | Swing
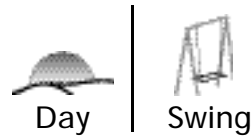
Maids and Housekeeping Cleaners

Skills & Other Requirements

Skills

Trunk Strength (3.40)

Wrist-Finger Speed (3.20)

Manual Dexterity (3.00)

Knowledge

Customer and Personal Service (3.83)

Computer Skills

None Required

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified	X		
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 42.5%

Recruitment Methods

80%	Employee Referrals
53%	Newspaper Ads
33%	Walk-in Applicants
13%	Other = Word-of-Mouth
13%	Union Hall Referrals
7%	Employment Development Department
7%	Internet

Projections

The projected growth for the period of 1999-2006 for **Maids and Housekeeping Cleaners** is 19.1% (remain stable).

Employment Levels

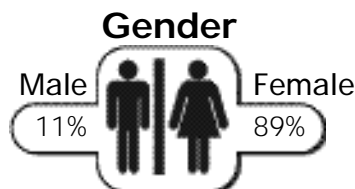Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	40%	47%	13%
Projected over the next 24 months	0%	53%	47%

Where the Jobs Are

- Hospitals
- Hotels and Motels
- Nursing and Personal Care Facilities
- Services to Buildings

Size of Occupation

Size as of 1999 = 3,870 (Large)

Gender

Male	Female
11%	89%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Pharmacy Technicians

Pharmacy Technicians fill orders for unit doses and prepackaged pharmaceuticals and perform other related duties under the supervision and direction of a pharmacy supervisor or staff pharmacist. Duties include keeping records of drugs delivered to the pharmacy, storing incoming merchandise in proper locations, and informing the supervisor of stock needs and shortages. They may clean equipment used in the performance of duties and assist in the care and maintenance of equipment and supplies. Replaces 325181 Pharmacy Technicians and 660260 Pharmacy Aides.

Wages & Benefits
Wages

Union and Non-Union

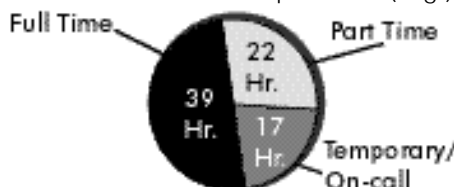|	Low	High	**Median**
New hires, no experience	$9.00	$13.00	**$10.63**
New hires, experienced	$10.00	$18.00	**$13.50**
3 years with firm, experienced	$12.00	$18.25	**$15.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	93%	0%	0%
Dental	73%	0%	0%
Vision	53%	0%	0%
Life	47%	0%	0%
Sick Leave	80%	0%	0%
Vacation	93%	0%	0%
Retirement	60%	7%	0%
Child Care	7%	0%	0%
*Other	13%	0%	0%

*Profit Sharing, Disability
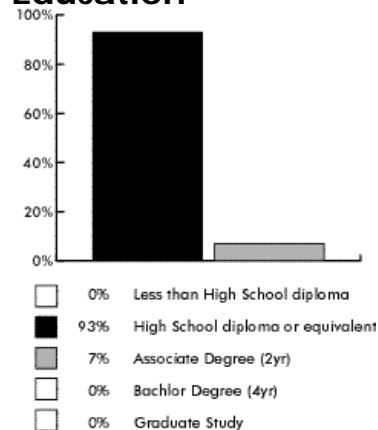
Employer Requirements
Education

☐	0%	Less than High School diploma
■	93%	High School diploma or equivalent
▨	7%	Associate Degree (2yr)
☐	0%	Bachlor Degree (4yr)
☐	0%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	73%	20%	7%

Previous experience required: 12 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	33%	67%	0%

12 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time. Part Time. 22 Hr. 39 Hr. 17 Hr. Temporary/On-call

Work Shifts

Day | Swing

Graveyard
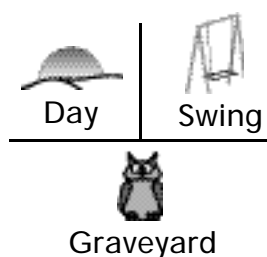
Skills & Other Requirements

Skills
Mathematics (3.83)
Reading Comprehension (3.83)
Science (3.33)
Active Listening (3.33)
Complex Problem Solving (3.16)
Writing (3.00)

Knowledge
Clerical (4.16)
Medicine and Dentistry (4.00)
Mathematics (3.66)
Computers and Electronics (3.66)
Chemistry (3.50)

Computer Skills
Word Processing
Datastat
PDX
RNA
PPC

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced			X

Turnover (Annual percentage rate of job turnover) = 8.8%

Recruitment Methods

53%	Employee Referrals
47%	Newspaper Ads
47%	Walk-in Applicants
40%	School, Program Referrals
27%	Other = Professional Referrals, Word-of-Mouth
7%	In-house Promotion or Transfer
7%	Union Hall Referrals

Where the Jobs Are

- Drug Stores and Proprietary Stores
- Hospitals

Projections

The projected growth for the period of 1999-2006 for **Pharmacy Technicians** is 28.8% (faster than average).
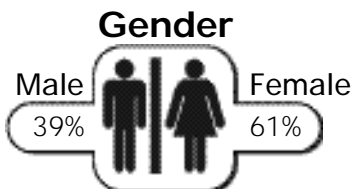
Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	0%	60%	40%
Projected over the next 24 months	0%	40%	60%

Size of Occupation

Size as of 1999 = 590 (Small)

Gender

Male 39%   Female 61%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Registered Nurses

OES 325020

Registered Nurses administer nursing care to ill or injured persons. This group includes administrative, public health, industrial, private duty, and surgical nurses. Licensing or registration is required. Please do not include Nursing Instructors and Teachers.
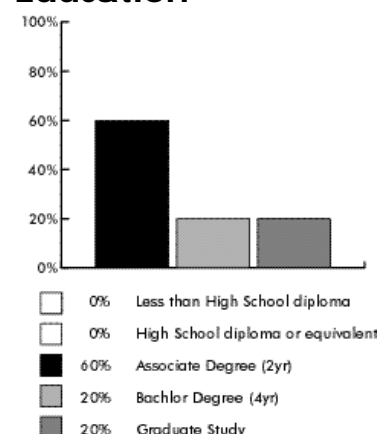
Wages & Benefits
Wages

Union				Non-Union		
Low	High	**Median**		Low	High	**Median**
$20.00	$32.00	**$23.95**	New hires, no experience	$25.00	$26.00	**$25.50**
$19.46	$35.00	**$24.77**	New hires, experienced	$17.74	$28.77	**$26.00**
$19.61	$45.00	**$28.46**	3 years with firm, experienced	$19.66	$31.00	**$28.77**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).
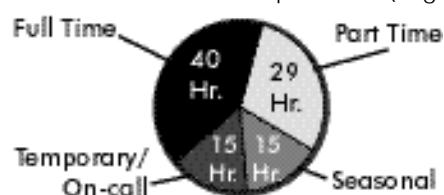
Employer Requirements
Education

☐ 0%	Less than High School diploma
☐ 0%	High School diploma or equivalent
■ 60%	Associate Degree (2yr)
▨ 20%	Bachlor Degree (4yr)
▨ 20%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	87%	0%	0%
Dental	87%	0%	0%
Vision	73%	13%	0%
Life	67%	7%	0%
Sick Leave	80%	0%	0%
Vacation	53%	0%	0%
Retirement	87%	0%	0%
Child Care	0%	0%	0%
Other	0%	0%	0%

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	60%	33%	7%

Previous experience required: 17 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	30%	70%	0%

3 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Work Shifts

Day	Swing

Graveyard
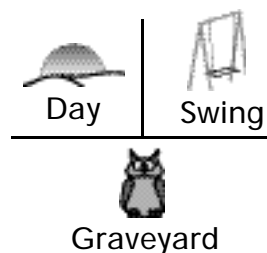
Skills & Other Requirements

Skills

Speaking (4.16)
Service Orientation (4.16)
Social Perceptiveness (3.91)
Reading Comprehension (3.91)
Judgment and Decision Making (3.91)
Critical Thinking (3.83)
Coordination (3.83)
Active Listening (3.75)
Complex Problem Solving (3.66)
Science (3.58)
Writing (3.58)
Monitoring (3.58)
Instructing (3.50)
Time Management (3.50)
Active Learning (3.25)
Management of Personnel Resources (3.16)
Systems Evaluation (3.08)
Systems Analysis (3.08)

Knowledge

Medicine and Dentistry (4.83)
Biology (4.50)
Customer and Personal Service (4.33)
Chemistry (4.16)
Therapy and Counseling (4.00)
English Language (3.66)
Education and Training (3.66)
Psychology (3.66)
Administration and Management (3.50)
Communications and Media (3.16)
Law, Government and Jurisprudence (3.08)
Mathematics (3.08)
Clerical (3.08)
Public Safety and Security (3.00)

Computer Skills

Word Processing
Spreadsheet
Desktop Publishing
Medtech
Micromed

Projections

The projected growth for the period of 1999-2006 for **Registered Nurses** is 11.5% (slower than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	13%	47%	40%
Projected over the next 24 months	7%	47%	47%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified			X
Inexperienced			X

Turnover (Annual percentage rate of job turnover) = 38.4%

Recruitment Methods

60%	Newspaper Ads
47%	Employee Referrals
47%	Other = Job Fair, Magazines, Professional Referrals, Job Boards, Word-of-Mouth
40%	Internet
27%	Colleges/Universities
13%	In-house Promotion or Transfer
7%	School, Program Referrals
7%	Union Hall Referrals
7%	Walk-In Applicants

Where the Jobs Are

- Hospitals
- Offices and Clinics of Medical Doctors

Size of Occupation

Size as of 1999 = 10,370 (Very Large)

Gender

Male 24% Female 76%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Sales Agents – Selected Business Services

OES 430170

Selected Business Services Sales Agents sell selected services such as building maintenance, credit reporting, bookkeeping, security, printing, and storage space. Please do not include sales agents who primarily sell advertising, insurance, financial, and real estate services.

Wages & Benefits
Wages

Non-Union

|	Low	High	**Median**
New hires, no experience	$8.00	$14.38	**$10.55**
New hires, experienced	$8.00	$47.95	**$19.18**
3 years with firm, experienced	$9.59	$59.93	**$47.95**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

	%	
☐	0%	Less than High School diploma
■	13%	High School diploma or equivalent
▨	20%	Associate Degree (2yr)
▨	67%	Bachlor Degree (4yr)
☐	0%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	47%	40%	0%
Dental	47%	40%	0%
Vision	53%	27%	0%
Life	47%	20%	0%
Sick Leave	93%	0%	0%
Vacation	93%	0%	0%
Retirement	33%	7%	33%
Child Care	0%	0%	0%
*Other	13%	0%	0%

*Stock Options, Tuition Reimbursement
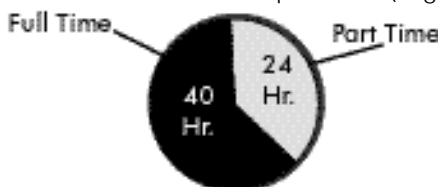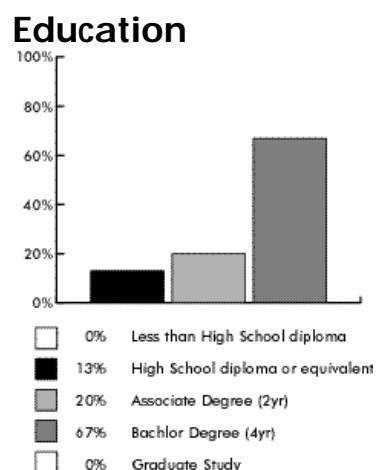
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	60%	33%	7%

Previous experience required: 47 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	0%	100%	0%

0 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 40 Hr. / Part Time 24 Hr.

Work Shifts

Day | Swing

43
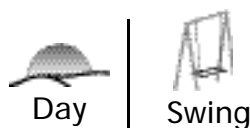
Sales Agents – Selected Business Services

Skills & Other Requirements

Skills
Speaking (4.66)
Persuasion (4.33)
Social Perceptiveness (4.33)
Service Orientation (4.33)
Negotiation (4.00)
Active Listening (4.00)
Systems Evaluation (3.83)
Complex Problem Solving (3.66)
Reading Comprehension (3.33)
Critical Thinking (3.33)
Coordination (3.33)
Management of Material Resources (3.16)
Writing (3.16)
Judgment and Decision Making (3.00)
Instructing (3.00)
Active Learning (3.00)
Mathematics (3.00)

Knowledge
Sales and Marketing (5.00)
Customer and Personal Service (4.16)
English Language (3.83)
Communications and Media (3.50)
Mathematics (3.50)
Education and Training (3.33)
Psychology (3.00)

Computer Skills
Word Processing
Spreadsheet
Database
Desktop Publishing
Goldmine Management
Power Point

Projections

The projected growth for the period of
1999-2006 for **Sales Agents–Selected
Business Services** is 30.2%
(much faster than average).

Employment Levels

Actual and projected growth as stated by
employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	7%	53%	40%
Projected over the next 24 months	0%	47%	53%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 16.6%

Recruitment Methods

80%   Employee Referrals
73%   Internet
20%   Other = Word-of-Mouth, Recruiters, Associates at other Companies
13%   Newspaper Ads
13%   Private Employment Agencies
13%   Walk-in Applicants
 7%   Employment Development Department

Where the Jobs Are

- Computer and Data Processing Services
- Hotels and Motels
- Mailing, Reproduction, Stenographic
- Miscellaneous Business Services
- Telephone Communications

Size of Occupation

Size as of 1999 = 2,480 (Medium)
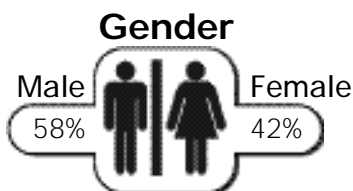
Gender

Male 58%   Female 42%

**Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.**

Secondary School Teachers

Secondary School Teachers instruct students in public or private high schools in one or more subjects, such as English, mathematics, or social studies. Please include vocational high school teachers. Please do not include special education teachers who teach only students with disabilities.
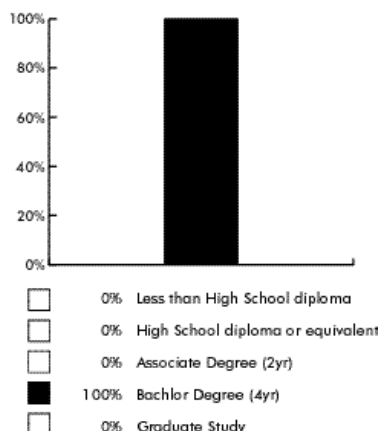
Wages & Benefits
Wages

Union				Non-Union		
Low	High	**Median**		Low	High	**Median**
$16.78	$25.57	**$19.81**	New hires, no experience	$12.11	$22.53	**$15.83**
$18.50	$26.85	**$23.07**	New hires, experienced	$13.04	$23.97	**$17.44**
$18.98	$37.78	**$29.26**	3 years with firm, experienced	$13.04	$25.41	**$19.32**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).
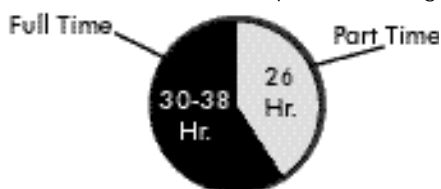
Employer Requirements
Education

☐	0%	Less than High School diploma
☐	0%	High School diploma or equivalent
☐	0%	Associate Degree (2yr)
■	100%	Bachlor Degree (4yr)
☐	0%	Graduate Study

Benefits

	Employer Pays	Shared Cost	Employee Pays All
	f/t	f/t	f/t
Medical	88%	6%	0%
Dental	75%	0%	0%
Vision	69%	0%	0%
Life	50%	0%	0%
Sick Leave	100%	0%	0%
Vacation	38%	0%	0%
Retirement	44%	31%	6%
Child Care	13%	6%	0%
*Other	19%	0%	0%

*Tuition, Income Protection Insurance

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	13%	50%	38%

Previous experience required: 18 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	38%	63%	0%

12 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Work Shifts

Day

Secondary School Teachers

Skills & Other Requirements

Skills
Speaking (4.83)
Instructing (4.83)
Learning Strategies (4.66)
Reading Comprehension (4.33)
Social Perceptiveness (4.16)
Active Listening (4.16)
Mathematics (4.00)
Monitoring (4.00)
Complex Problem Solving (4.00)
Writing (3.83)
Service Orientation (3.66)
Active Learning (3.66)
Time Management (3.66)
Critical Thinking (3.50)
Quality Control Analysis (3.33)
Equipment Selection (3.33)
Operations Analysis (3.16)
Judgment and Decision Making (3.16)
Management of Personnel Resources (3.00)
Coordination (3.00)

Knowledge
Education and Training (5.00)
English Language (4.16)
Therapy and Counseling (3.16)
Mathematics (3.16)

Computer Skills
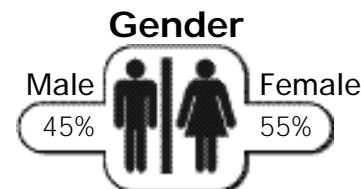|	
Word Processing	Desktop Publishing
Spreadsheet	SASI Grading
Database	System

Projections
The projected growth for the period of 1999-2006 for **Secondary School Teachers** is 17.2% (slower than average).

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 0months	0%	38%	63%
Projected over the next 24 months	6%	63%	31%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified	X		
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 14.4%

Recruitment Methods

56%	Other = Recruitment Fairs, Word-of-Mouth
50%	Colleges/Universities
44%	Internet
44%	Newspaper Ads
38%	Employee Referrals
25%	School, Programs Referrals
6%	In-house Promotion or Transfer
6%	Private Employment Agencies
6%	Trade Journals
6%	Walk-in Applicants

Where the Jobs Are
• Elementary and Secondary Schools

Size of Occupation
Size as of 1999 = 7,920 (Very Large)

Gender
Male 45% Female 55%

46

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County. See Appendix D for definitions of Skills & Other Requirements.

Software Engineers

Software Engineers research, design, and develop computer software systems, in conjunction with hardware product development, applying principles and techniques of computer science, engineering, and mathematical analysis. They consult with hardware engineers and other engineering staff to evaluate interface between hardware and software, and operational and performance requirements of overall system. They formulate and design software systems to predict and measure outcome and consequences of design. They develop and direct software system testing procedures, programming, and documentation.

Wages & Benefits
Wages

Non-Union

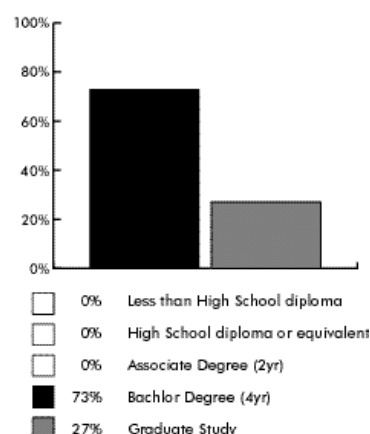|	Low	High	**Median**
New hires, no experience	$0.00	$0.00	**$0.00**
New hires, experienced	$19.18	$43.15	**$31.16**
3 years with firm, experienced	$27.17	$57.53	**$40.75**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	73%	27%	0%
Dental	73%	27%	0%
Vision	80%	13%	0%
Life	93%	0%	0%
Sick Leave	87%	0%	7%
Vacation	93%	0%	7%
Retirement	67%	0%	0%
Child Care	20%	7%	0%
Other	0%	0%	0%

Hours Worked per week (avg.)

Full Time

43 Hr.

Employer Requirements
Education

☐	0%	Less than High School diploma
☐	0%	High School diploma or equivalent
☐	0%	Associate Degree (2yr)
■	73%	Bachlor Degree (4yr)
▨	27%	Graduate Study

Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	100%	0%	0%

Previous experience required: 42 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	20%	80%	0%

32 mos. of training on average can be substituted for experience.

Work Shifts

Day | Swing

47

Skills & Other Requirements

Skills

Operations Analysis (4.66)
Mathematics (4.50)
Complex Problem Solving (4.33)
Troubleshooting (4.33)
Programming (4.33)
Science (4.33)
Active Learning (4.16)
Quality Control Analysis (4.00)
Speaking (4.00)
Critical Thinking (4.00)
Active Listening (3.83)
Reading Comprehension (3.83)
Technology Design (3.83)
Judgment and Decision Making (3.83)
Installation (3.66)
Systems Evaluation (3.33)
Systems Analysis (3.16)

Knowledge

Computers and Electronics (5.00)
Mathematics (4.33)
Engineering and Technology (4.33)
English Language (3.66)
Design (3.33)

Computer Skills

Word Processing	C++
Spreadsheet	JAVA
Database	All Operating
Desktop Publishing	Systems

Projections

The projected growth for the period of 1999-2006 for **Software Engineers** is not available.

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	33%	40%	27%
Projected over the next 24 months	7%	47%	47%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified		X	
Inexperienced *			

*Employers surveyed do not hire inexperienced applicants.

**Turnover** (Annual percentage rate of job turnover) = 25.0%

Recruitment Methods

93%	Internet
67%	Employee Referrals
40%	Other = Job Boards, Job Fairs, Word-of-Mouth
27%	Newspaper Ads
20%	School, Program Referrals
7%	Colleges/Universities
7%	In-house Promotion or Transfer
7%	Walk-in Applicants

Where the Jobs Are

- Business Consulting Services, NEC
- Communications Equipment, NEC
- Computer and Computer Software Stores
- Computer Integrated Systems Design
- Computer Maintenance and Repair
- Computer Programming Services
- Computers and Computer Peripheral Equipment and Software
- Photographic Equipment and Supplies
- Prepackaged Software
- Semiconductors and Related Devices
- Testing Laboratories
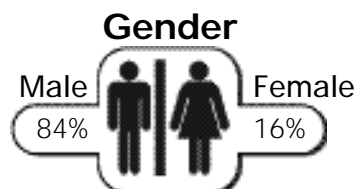
Size of Occupation

Information not available.

Gender

Male	Female
84%	16%

48

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County. See Appendix D for definitions of Skills & Other Requirements.

Santa Clara County 2002 Occupational Outlook Report

Systems Analysts – Electronic Data Processing

OES 251020

Systems Analysts, Electronic Data Processing, analyze business, scientific, and technical problems for application to electronic data processing systems. Please do not include persons working primarily as engineers, mathematicians, programmers, or scientists.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$12.00	$19.18	**$15.59**
New hires, experienced	$15.98	$38.36	**$25.22**
3 years with firm, experienced	$25.00	$44.11	**$33.08**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Benefits

	Employer Pays	Shared Cost	Employee Pays All
	f/t	f/t	f/t
Medical	73%	27%	0%
Dental	73%	27%	0%
Vision	53%	33%	0%
Life	73%	7%	0%
Sick Leave	93%	0%	0%
Vacation	93%	0%	0%
Retirement	27%	47%	13%
Child Care	20%	7%	7%
*Other	7%	0%	0%

*Profit Sharing

Employer Requirements
Education

☐	0%	Less than High School diploma
■	7%	High School diploma or equivalent
▨	7%	Associate Degree (2yr)
▨	80%	Bachlor Degree (4yr)
■	7%	Graduate Study
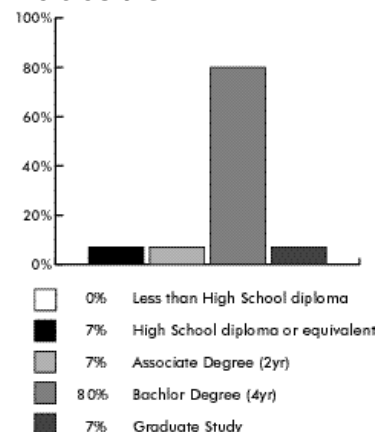
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	87%	7%	7%

Previous experience required: 37 mos. on average

	Yes	No	Not Required but Preferred
Training as a substitute for experience	43%	57%	0%

23 mos. of training on average can be substituted for experience.
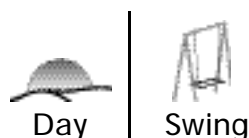
Hours Worked per week (avg.)

Work Shifts

Day | Swing

49

Skills & Other Requirements

Skills

Coordination (4.16)
Complex Problem Solving (4.16)
Writing (4.00)
Speaking (4.00)
Active Learning (4.00)
Reading Comprehension (4.00)
Judgment and Decision Making (4.00)
Management of Personnel Resources (3.83)
Critical Thinking (3.66)
Operations Analysis (3.66)
Management of Material Resources (3.66)
Social Perceptiveness (3.66)
Systems Evaluation (3.50)
Monitoring (3.50)
Management of Financial Resources (3.50)
Systems Analysis (3.50)
Mathematics (3.33)
Active Listening (3.33)
Time Management (3.16)
Quality Control Analysis (3.16)

Knowledge

Administration and Management (5.00)
Computers and Electronics (4.83)
Mathematics (4.00)
English Language (3.83)
Economics and Accounting (3.66)
Education and Training (3.50)
Personnel and Human Resources (3.50)
Customer and Personal Service (3.33)
Clerical (3.33)
Psychology (3.00)

Computer Skills

Word Processing
Spreadsheet
Database
Desktop Publishing
All Operating Systems
Power Point
Adobe PhotoShop
JAVA
C
C++
ERP
BAAN

Projections

The projected growth for the period of 1999-2006 for **System Analysts** is 85.0% (much faster than average).

Employment Levels

Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	27%	47%	27%
Projected over the next 24 months	0%	60%	40%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified	X		
Inexperienced	X		

Turnover (Annual percentage rate of job turnover) = 7.6%

Recruitment Methods

80%   Internet
53%   Newspaper Ads
47%   Other = Job Boards
27%   Employee Referrals
27%   Private Employment Agencies
13%   Colleges/Universities

Where the Jobs Are

• Computer and Data Processing Services
• Electronic Components and Accessories
• Research and Testing Services

Size of Occupation

Size as of 1999 = 8,760 (Very Large)

Gender

Male		Female
71%		29%

Please refer to appendices B & C to locate training providers for this occupation in Santa Clara County.
See Appendix D for definitions of Skills & Other Requirements.

Truck Drivers, Light – Include Delivery and Route Workers

OES 971050

Light Truck Drivers, including Delivery and Route Workers, drive vehicles with a capacity under 3 tons. They deliver or pick up merchandise and may load and unload trucks. Please do not include workers whose duties include sales.

Wages & Benefits
Wages

Non-Union

	Low	High	**Median**
New hires, no experience	$7.00	$12.00	**$10.25**
New hires, experienced	$8.00	$18.41	**$11.75**
3 years with firm, experienced	$11.25	$20.00	**$14.00**

Although information is shown to the nearest whole number for ease of comparison, the reader should not interpret this as an indication of precision (ranges are also considered to be representative).

Employer Requirements
Education

■	38%	Less than High School diploma
▨	63%	High School diploma or equivalent
□	0%	Associate Degree (2yr)
□	0%	Bachlor Degree (4yr)
□	0%	Graduate Study

Benefits

	Employer Pays f/t	Shared Cost f/t	Employee Pays All f/t
Medical	63%	25%	0%
Dental	50%	13%	0%
Vision	31%	6%	0%
Life	25%	0%	0%
Sick Leave	38%	0%	0%
Vacation	56%	0%	0%
Retirement	38%	0%	0%
Child Care	6%	0%	0%
Other	0%	0%	0%
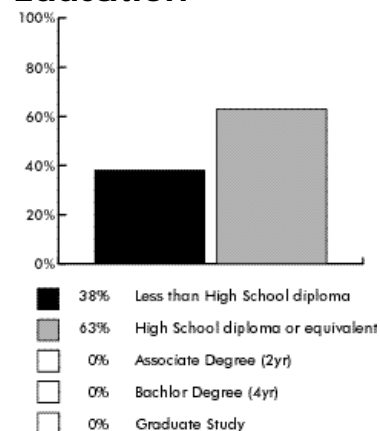
Training & Experience

	Yes	No	Not Required but Preferred
Previous experience required	31%	38%	31%

Previous experience required: 23 mos. on average

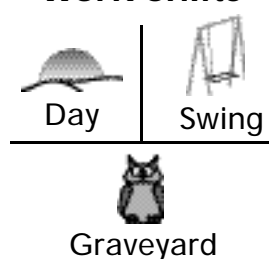|	Yes	No	Not Required but Preferred
Training as a substitute for experience	70%	30%	0%

5 mos. of training on average can be substituted for experience.

Hours Worked per week (avg.)

Full Time 30-42 Hr.
Part Time 26 Hr.

Work Shifts

Day | Swing

Graveyard
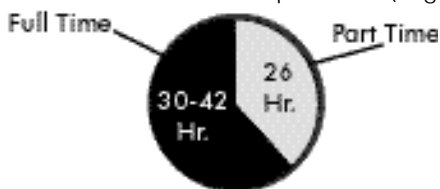
Truck Drivers, Light – Include Delivery and Route Workers

Skills & Other Requirements

Skills
Operation and Control (3.33)

Knowledge
Transportation (4.83)
Geography (3.50)
Mechanical (3.50)
Public Safety and Security (3.16)
Clerical (3.00)

Computer Skills
Word Processing
Spreadsheet
Database
Verisform

Projections
The projected growth for the period of 1999-2006 for **Truck Drivers, Light–Include Delivery and Route Workers** is 23.8% (faster than average).

Employment Levels
Actual and projected growth as stated by employers surveyed.

	Decline	Remain Stable	Grow
During the last 12 months	13%	75%	13%
Projected over the next 24 months	0%	88%	13%

Supply & Demand (difficulty in finding applicants)

	Not Difficult	Moderately Difficult	Very Difficult
Fully experienced & qualified			X
Inexperienced		X	

Turnover (Annual percentage rate of job turnover) = 28.1%

Recruitment Methods

69%	Employee Referrals
69%	Newspaper Ads
25%	Walk-in Applicants
19%	Private Employment Agencies
13%	Colleges/Universities
13%	Other = Word-of-Mouth, Job Postings

Where the Jobs Are
- Air Transportation, Scheduled
- Eating and Drinking Places
- Freight Transportation Arrangement
- Furniture and Homefurnishings Store
- Groceries and Related Products
- Laundry, Cleaning, and Garment Services
- Mailing, Reproduction, Stenographic
- Miscellaneous Business Services
- Miscellaneous Equipment Rental and Leasing
- Motor Vehicles, Parts and Supplies
- Personnel Supply Services
- Trucking and Courier Services, Except Air

Size of Occupation
Size as of 1999 = 8,290 (Very Large)

Gender
Male 91%   Female 9%

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Acknowledgements

Appendix A: Previously Studied Occupations 1995-2002

A Accountants & Auditors: 1999, 2002

Adjustment Clerks: 1997

Administrative Assistants: 1999, 2002

Administrative Services Managers: 2002

Assemblers: Electrical & Electronic Equipment: 1995, 2000

Assemblers & Fabricators-except Machine, Electrical, Electronic and Precision: 1999

Automotive Mechanics: 1996, 2001

B Bill & Account Collectors: 1998

Biological, Agricultural & Food Technicians & Technologists - except Health: 1995

Biological Scientists: 1995, 2002

Biotechnology Laboratory Assistants: 2002

Biotechnology Research Assistants: 1998

Bookkeeping, Accounting & Auditing Clerks - including Bookkeepers: 1995, 1999, 2002

Brokerage Clerks: 1998

Bus & Truck Mechanics & Diesel Engine Specialists: 1996

C Carpenters: 2000

Cashiers: 1999, 2002

Chemical Technicians & Technologists - except Medical & Clinic: 1995

Child Care Workers: 1999

Claims Examiners - Property & Casualty Insurance: 1997

Combined Food Preparation and Service Workers: 1999

Compliance Officers & Enforcement Inspectors - except Construction: 1996

Computer Aided Audio/Visual Engineers: 1996

Computer Aided Design Technicians: 1997, 2001

Computer Animators: 1996

Computer Engineers: 1995, 1999, 2002

Computer Network Administrators & Managers: 2000

Computer Network Technicians: 2001

Computer Operators: 1995

Computer Programmers, including Aides: 1997, 2000

Computer & Software Support Technicians: 2001

Computer Support Specialists: 1998, 2001

Cooks - Restaurant: 1995,1999, 2002

Correction Officers & Jailers: 1995

D Database Administrators: 2000

Dental Assistants: 1996, 2000

Dental Hygienists: 2001

Desktop Publishing - Graphic Designer: 1997 (see also Graphic Designer)

Dispatchers - except Police, Fire & Ambulance: 1995

E Electrical and Electronic Engineering - Technicians and Technologists: 1996, 1999, 2002

Electrical and Electronic Engineers: 1996, 2000

Electricians: 1995, 2000

Electronic Home Entertainment Equipment Repairers: 1998

Electronic Semiconductor Processors: 1999, 2002

Emergency Medical Technicians - 1: 2002

Emergency Medical Technicians - 2: 2002

Emergency Medical Technicians - Paramedic: 2002

Employment Interviewers - Private or Public Employers: 1997, 2001

Engineering, Mathematical & Natural Sciences Managers: 1998

Farm Equipment Operators: 1996
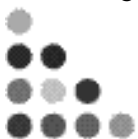
Appendix A: Previously Studied Occupations 1995-2002

F Financial Managers: 1999, 2002

Financial Planners: 1998

Firefighters: 2002

Food Preparation Workers: 1998

Food Service Managers: 2000

G Gardeners, Groundskeepers - except Farm: 1995

General Managers & Top Executives: 2000

General Office Clerks:1998

Graphic Designers: 2001

Guards & Watch Guards: 1998, 2002

H Hand Packers & Packagers: 1999

Hazardous Waste Management Specialists: 1995

Heating, Air Conditioning & Refrigeration Mechanics and Installers: 1997

Home Health Aides: 1998, 2001

Hotel Desk Clerks: 1997

Human Resource Technician: 2002

Human Service Workers: 1995

I Industrial Engineers - except Safety: 1996

Inspectors, Testers, and Graders – Precision: 1999

Instructional Aides: 1995, 2000

Integrated Circuit Fabricators/Operators: 1996

Integrated Circuit Layout Designers: 1996, 2001

Internet Server Designers & Administrators (Webmasters): 1996, 2001

J Janitors & Cleaners - except Maids & Housekeeping Cleaners: 1997, 2000

L Laborers, Landscaping & Groundskeeping: 2000

LAN/WAN (Local / Wide Area Network) Managers: 1995

Librarians - Professional: 1996

Licensed Vocational Nurses: 1997

Lodging Managers: 2000

M Machinists: 1997

Maids & Housekeeping Cleaners: 1998, 2002

Maintenance Repairers - General Utility: 2000

Marketing, Advertising, and Public Relations Managers: 1996, 1999

Mechanical Engineers: 1998

Medical Assistants: 1996, 2000

Medical & Clinical Laboratory Technologists: 1995

Medical Records Technicians: 1997, 2001

Multimedia Specialists: 1998

N Network Professionals: 2000

Nurse Aides: 1995, 1999

O Occupational Therapists: 1997, 2001

Office Equipment Installers and Repairers: 1997

Order Clerks - Materials, Merchandise & Service: 1997

P Painters, Paperhangers - Construction & Maintenance: 1995, 2000

Paralegal Personnel: 1998

Personnel, Training, and Labor Relations Specialists: 1997

Pharmacy Technicians: 1996, 2002

Physical Therapists: 1997, 2001

Physical Therapy Aides: 1998, 2001

Physical Therapy Assistants: 1998, 2001

Plumbers, Pipefitters, and Steamfitters: 1997, 2000

Police Patrol Officers: 1995, 2000

Production, Planning, and Expediting Clerks: 1999

Public Relations Specialists & Publicity Writers: 1997, 2001

Purchasing Agents - except Wholesale, Retail & Farm Products: 1999

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Appendix A: Previously Studied Occupations 1995-2002

Purchasing Managers: 1997, 1999

Q Quality Assurance Managers: 1997

R Receptionists & Information Clerks: 1998, 2001

Recreation Workers: 1995

Registered Nurses: 1995, 1999, 2002

Respiratory Care Practitioners: 1995, 2001

S Sales Agents & Placers - Insurance: 1998

Sales Agents, Selected Business Services: 2002

Sales Engineers: 1996

Salespersons - Retail (Except Vehicle Sales): 1998, 2001

Sales Representatives, Scientific and Related Products and Services - except Retail: 1996, 1999, 2001

Secretaries - except Legal & Medical : 1996, 1999

Secretaries, Medical: 1997

Sheet Metal Duct Installers: 2001

Social Workers: 1996

Software Engineers: 1996, 2002

Speech, Language Pathologists & Audiologists: 2001

Stock Clerks - Sales Floor: 2000

Stock Clerks - Stockroom, Warehouse, Storage Yard: 1998

Systems Analysts - Electronic Data Processing: 1998, 2002

T Teachers - Elementary School: 1997, 2000

Teachers - ESL (English as a Second Language): 2002

Teachers, Preschool: 2000

Teachers, Secondary School: 1998, 2002

Teachers - Special Education: 2001

Technical Writers: 1999

Telemarketers, News and Street Vendors, Telephone Solicitors, Door-to-Door Sales Workers and Other Related Workers: 1999

Telephone & Cable Line Installers: 2001

Traffic, Shipping, and Receiving Clerks: 1999

Travel Agents: 1997

Truck Drivers, Light - including Delivery & Route Workers: 1995, 1999, 2002

V Vehicle Salespersons - Retail: 2000

Veterinary Assistants: 1997

W Waiters & Waitresses: 1998

Wholesale & Retail Buyers - except Farm Products: 1996

Writers & Editors: 1998

Appendix B: Training Providers by Occupation

Accountants & Auditors
Bay Area Executrain
Computer Training Consultants
Evergreen Valley College
Foothill College
Mission College
OTI/Foothill-De Anza College
San Jose City College
San Jose Computer Academy
San Jose State University
UCSC Extension
University Of Phoenix
West Valley College

Administrative Assistants
American Business College International
California College of Communications
Computer Training Consultants
Foothill College
Institute for Business and Technology
Milpitas Adult Education
San Jose Computer Academy

Administrative Services Managers
Bay Area Executrain
California College of Communications
Computer Training Consultants
Foothill College
International Technological University
Mission College
National Institute of Technology
San Jose State University
UCSC Extension

Biological Scientists
Evergreen Valley College
Foothill College
Mission College
San Jose State University
West Valley College

Biotechnology Laboratory Assistants
Foothill College
OTI/Foothill-De Anza College
Santa Clara Regional Occupation Center - North
USCS Extension

Bookkeeping, Accounting and Auditing Clerks
American Business College International
Bay Area Executrain
Center for Employment Training
Computer Training Consultants
East Side Union High School District
Milpitas Adult Education
OTI/Foothill-De Anza College
Santa Clara Regional Occupation Center - North
San Jose Computer Academy
Software Advanced Technologies

Cashiers
Institute for Career Development

Computer Engineer
Foothill College
International Technological University
Mission College
OTI/Foothill-De Anza College
Portnov Computer School
San Jose State University
West Valley College

Cooks
Santa Clara Regional Occupation Center - North

Electrical and Electronic Engineering Technicians and Technologists
Evergreen Valley College
Foothill College
International Technological University
Santa Clara Regional Occupation Center - North
San Jose City College
San Jose State University
Micro-PolyTech Institute
OTI/Foothill-De Anza College

Electronic Semiconductor Processors
Central County Occupational Center (CCOC)
San Jose City College
San Jose State University

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Appendix B: Training Providers by Occupation

EMT - 1
OTI/Foothill-De Anza College
WestMed Training Institute

EMT - Paramedic
Foothill College

ESL Teachers
San Jose State University
UCSC Extension (TESL/CLAD)

Financial Managers
San Jose State University
UCSC Extension

Firefighters
Cogswell Polytechnical College
Mission College

Guards & Watch Guards
Targetmasters Security Training School

HR Technicians
Computer Training Consultants
San Jose State University
UCSC Extension

Maids and Housekeeping
None

Pharmacy Technicians
East Side Union high School District
Foothill College
OTI/Foothill-De Anza College
University of Phoenix

Registered Nurses
Evergreen Valley College
San Jose State University

Sales Agents
San Jose State University
Software Advanced Technologies

Secondary Teachers
National Hispanic University
San Jose State University
UCSC Extension (TESL/CLAD)
University of Phoenix

Software Engineers
Foothill College
International Technological University
MOS Drafting Institute
Software Advanced Technologies
UCSC Extension

Systems Analyst
Bay Area Executrain
Evergreen Valley College
Institute of Computer Technology
Mission College
San Jose State University
San Jose City College
The Copper Connection, Inc.
UCSC Extension
University of Phoenix
West Valley College

Truck Drivers
Area Truck Driving School
AB Truck Driving School

Appendix C: Training Providers by Index

AB Truck Driving School
3750 McKee Road, B4
San Jose, CA 95127
Phone 408-298-1072
Fax 408-298-1072

American Business College International
650 North King Road
San Jose, CA 95133
Phone 408-258-0800
Fax 408-258-8553
www.americanbci.com

Area Truck Driving School
1061 Martin Avenue
Santa Clara, CA 95050
Phone 408-283-9027
Fax 408-283-9028
www.areatruckdrivingschool.com

California College of Communications
700 West Hamilton Avenue, Suite 210
Campbell, CA 95008
Phone 408-374-5066
Fax 408-374-3173
www.calcc.com

Central County Occupational Center (CCOC)
760 Hillsdale Avenue, Room 808
San Jose, CA 95136
Phone 408-723-6400
Fax 408-723-6487
www.career.metroed.net

Cogswell Polytechnical College
1175 Bordeaux Drive
Sunnyvale, CA 94089
Phone 800-264-7955
www.cogswell.edu

Computer Training Consultants
144 North San Tomas Aquino Road
Campbell, CA 95008
Phone 408-871-6636
Fax 408-871-6633
www.comptraining.com

Bay Area Executrain
(Formerly Computer Training Resources)
2005 De La Cruz Boulevard, #200
Santa Clara, CA 95050
Phone 800-305-3855
Fax 800-211-4111
www.ctrtrain.com

East Side Union High School District
625 Educational Park Drive
San Jose, CA 95133
Phone 408-928-9301
Fax 408-928-9301
www.esuhsd.org

Evergreen Valley College
3095 Yerba Buena Road
San Jose, CA 95135
Phone 408-274-7900
www.evc.edu

Foothill College
12345 El Monte Road
Los Altos Hills,CA94022-4599
Phone 650-949-7777
Fax 650-949-7375
www.foothill.fhda.edu

Institute for Business and Technology
2550 Scott Boulevard
Santa Clara, CA 95050
Phone 408-727-1060
Fax 408-980-9548
www.ibttech.com

Institute for Career Development
1080 North Seventh Street
San Jose, CA 95112
Phone 408-998-5787
www.goodwillsanjose.com

International Technological University
1650 Warburton Avenue
Santa Clara, CA 95050-3714
Phone 408-556-9010
Fax 408-556-9212
www.itu.edu

Micro-PolyTech Institute
1108-1110 Walsh Avenue
Santa Clara, CA 95050-2646
Phone 408-492-9048
Fax 408-492-1464
www.micropolytech.com

Milpitas Adult Education Programs
1331 East Calaveras Boulevard, Building 400
Milpitas, CA 95035
Phone 408-945-2392
Fax 408-945-2378
www.musd.org/adult_ed

Mission College
3000 Mission College Blvd.
Santa Clara, CA 95054-1897
Phone 408-988-2200
www.missioncollege.org

National Bartenders School
1398-C El Camino Real
Mountain View, CA 94040
Phone 650-968-9933
Fax 801-837-3699
www.nationalbartending.com

National Hispanic University
14271 Story Road
San Jose, CA 95127-3823
Phone 408-254-6900
Fax 408-254-1369
www.nhu.edu

National Institute of Technology
(Formerly Computer Training Academy)
235 Charcot Avenue
San Jose, CA 95131
Phone 408-441-6990
Fax 408-441-6994
www.nitschools.com

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Appendix C: Training Providers by Index

OTI/Foothill - De Anza Colleges
21250 Stevens Creek Boulevard (De Anza)
Cupertino, CA 95014
Phone 408-864-8869
Fax 408-864-8462
www.oti.fhda.edu

San Jose City College
2100 Moorpark Avenue
San Jose, CA 95128
Phone 408-288-3708
Fax 408-223-3000
www.sjcc.edu

San Jose Computer Academy
2111 Quimby Road
San Jose, CA 95122
Phone 408-223-8615
Fax 408-223-8628

San Jose State University
One Washington Square
San Jose, CA 95192
Phone 408-924-1000
Fax 408-924-2050
www.sjsu.edu

Santa Clara Adult Education
1840 Benton Street
Santa Clara, CA 95050
Phone 408-423-3500
Fax 408-423-3580
www.scae.org

Santa Clara County Regional Occupational Program
575 West Fremont Avenue
Sunnyvale, CA 94087
Phone 408-733-0881
Fax 408-733-0894
www.ncrop.sccoe.net

Software Advanced Technologies
755 South Bernardo Avenue
Sunnyvale, CA 94087
Phone 408-616-7778
Fax 408-616-7779
www.saticareers.com

Targetmasters Security Training School
122 Minnis Circle
Milpitas, CA 95035
Phone 408-263-7468

The Copper Connection, Inc.
3003 Bunker Hill Lane, Suite 201
Santa Clara, CA 95054-1106
Phone 408-970-9838
Fax 408-970-9184
www.copperconnection.org

UCSC - Extension
Cupertino Campus
10420 Bubb Road
Cupertino, CA 95014
Phone 408-861-3700

Sunnyvale Campus
Moffett Business Park
1180 Bordeaux Drive
Sunnyvale, CA 94089
Phone 408-752-1300
www.ucsc-extension.edu

University of Phoenix
3590 North First Street
San Jose, CA 95134
Phone 877-478-8336
www.phoenix.edu

West Valley College
14000 Fruitvale Avenue
Saratoga, CA 95070
Phone 408-741-2000
www.wvmccd.cc.ca.us/wvc

WestMed Training
1330 South Bascom Avenue, Suite B2
San Jose, CA 95128
Phone 408-977-0723
Fax 408-977-1396
www.westmedtraining.com

Appendix D: Definitions for Skills & Other Requirements

Source www.skillmatrixnetwork.com
Refer to the Project Methodology for more information.

Skills

Active Listening: Listening to what other people are saying and asking questions as appropriate

Complex Problem Solving: Complex problem solving is used in identifying complex problems and reviewing related information so that options may be developed and evaluated, and solutions may be put into action.

Coordination: Adjusting actions in relation to others' actions

Critical Thinking: Using logic and analysis to identify the strengths and weaknesses of different approaches

Equipment Maintenance: Performing routine maintenance and determining when and what kind of maintenance is needed

Equipment Selection: Determining the kind of tools and equipment needed to do a job

Installation: Installing equipment, machines, wiring, or programs to meet specifications

Instructing: Teaching others how to do something

Judgment and Decision Making: Weighing the relative costs and benefits of a potential action

Learning Strategies: Using multiple approaches when learning or teaching new things

Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures

Management of Material Resources: Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work

Management of Personnel Resources: Motivating, developing, and directing people as they work, identifying the best people for the job

Manual Dexterity: The ability to quickly make coordinated movements of one hand, a hand together with its arm, or two hands to grasp, manipulate, or assemble objects

Mathematics: Using mathematics to solve problems

Monitoring: Assessing how well one is doing when learning or doing something

Operation and Control: Controlling operations of equipment or systems

Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly

Operations Analysis: Analyzing needs and product requirements to create a design

Programming: Writing computer programs for various purposes

Quality Control Analysis: People use quality control analysis skills to conduct tests and inspections. This skill may be applied to products, services, and processes so that a company can evaluate quality or performance level.

Reading Comprehension: Understanding written sentences and paragraphs in work related documents

Science: Using scientific methods to solve problems

Service Orientation: Actively looking for ways to help people

Social Perceptiveness: Being aware of others' reactions and understanding why they react the way they do

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Appendix D: Definitions for Skills & Other Requirements

Speaking: Talking to others to effectively convey information

Systems Analysis: Systems analysis skills are important in determining how a system should work. This skill is also used to figure out how changes in conditions, operations, and the environment will affect outcomes.

Systems Evaluation: Systems evaluations skills are used in identifying the measures or indicators of system performance. It is also vital in deciding what actions are needed to improve or correct performance, relative to the goals of the system.

Technology Design: Generating or adapting equipment and technology to serve user needs

Time Management: Managing one's own time and the time of others

Troubleshooting: Determining what is causing an operating error and deciding what to do about it

Trunk Strength: The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing

Wrist-Finger Speed: The ability to make fast, simple, repeated movements of the fingers, hands, and wrists

Writing: Communicating effectively with others in writing as indicated by the needs of the audience

Knowledge

Administration and Management: Knowledge of principles and processes involved in business and organizational planning, coordination, and execution. This includes strategic planning, resource allocation, manpower modeling, leadership techniques, and production methods.

Biology: Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment

Chemistry: Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Clerical: Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology

Communications and Media: Knowledge of media production, communication, and dissemination techniques and methods including alternative ways to inform and entertain via written, oral, and visual media

Computers and Electronics: Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming

Customer and Personal Service: Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques

Design: Knowledge of design techniques, principles, tools and instruments involved in the production and use of precision technical plans, blueprints, drawings, and models

Economics and Accounting: Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data

Appendix D: Definitions for Skills & Other Requirements

Education and Training: Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles

Engineering and Technology: Knowledge of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications

English Language: Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar

Food Production: Knowledge of techniques and equipment for planting, growing, and harvesting of food for consumption including crop rotation methods, animal husbandry, and food storage/handling techniques

Geography: Knowledge of various methods for describing the location and distribution of land, sea, and air masses including their physical locations, relationships, and characteristics

Law, Government and Jurisprudence: Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process

Mathematics: Knowledge of numbers, their operations, and interrelationships including arithmetic, algebra, geometry, calculus, statistics, and their applications

Medicine and Dentistry: Knowledge of the information and techniques needed to diagnose and treat injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive healthcare measures

Personnel and Human Resources: Knowledge of policies and practices involved in personnel/human resource functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies.

Physics: Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena

Production and Processing: Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods

Psychology: Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders

Public Safety and Security: Knowledge of weaponry, public safety, and security operations, rules, regulations, precautions, prevention, and the protection of people, data, and property

Telecommunications: Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems

Therapy and Counseling: Knowledge of information and techniques needed to rehabilitate physical and mental ailments and to provide career guidance including alternative treatments, rehabilitation equipment and its proper use, and methods to evaluate treatment effects

Transportation: Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including their relative costs, advantages, and limitations

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Please Place Scaned Image Here

Sample CCOIS Occupational Survey Questionnaire

Table 4
Occupations With the Greatest Absolute Job Growth (1)
Santa Clara County
1999-2006

CA OES Code	Occupation (Definitions)	Annual Averages 1999 (2)	2006	Absolute Change	Percent Change
22127	COMPUTER ENGINEERS	19,000	31,960	12,960	68.3
25104	COMPUTER SUPPORT SPECIALISTS	10,660	18,310	7,660	71.9
25102	SYSTEMS ANALYSTS, ELECTRONIC DATA PROCESSING	8,760	16,210	7,460	85.0
49011	SALESPERSONS, RETAIL	25,180	30,910	5,730	22.8
19005	GENERAL MANAGERS, TOP EXECUTIVES	27,699	33,030	5,340	19.3
49023	CASHIERS	16,640	20,180	3,540	21.3
22135	ELECTRICAL & ELECTRONIC ENGINEERS	19,030	22,470	3,440	18.1
67005	JANITORS, CLEANERS, EXCEPT MAIDS	16,110	19,510	3,400	21.1
13017	ENGINEERING, MATH & NATURAL SCIENCE MGRS	10,060	13,360	3,310	32.9
55347	GENERAL OFFICE CLERKS	21,910	25,200	3,290	15.0
25105	COMPUTER PROGRAMMERS	14,200	17,240	3,040	21.4
55305	RECEPTIONISTS, INFORMATION CLERKS	10,680	12,900	2,220	20.8
97105	TRUCK DRIVERS, LIGHT	8,290	10,260	1,970	23.8
79041	LABORERS, LANDSCAPING, GROUNDSKEEPING	7,920	9,720	1,800	22.7
97102	CARPENTERS	6,630	8,430	1,800	27.1
65008	WAITERS & WAITRESSES	12,290	13,980	1,690	13.8
21114	ACCOUNTANTS & AUDITORS	9,310	10,950	1,640	17.6
98902	HAND PACKERS & PACKAGERS	4,810	6,370	1,560	32.4
55108	SECRETARIES, GENERAL	18,600	20,130	1,530	8.2
13011	MARKETING, ADVERTISING, PUB-RELATIONS MGRS	7,750	9,360	1,510	19.5
22505	ELECTRICAL, ELECTRONIC ENGINEERING TECHS	10,290	11,670	1,380	13.4
31308	TEACHERS, SECONDARY SCHOOL	7,920	9,280	1,360	17.2
25103	DATA BASE ADMINISTRATORS	1,700	2,970	1,270	74.7
49005	SALES REPS, SCIENTIFIC, EX RETAIL	7,010	8,280	1,270	18.1
92902	ELECTRONIC SEMICONDUCTOR PROCESSORS	6,960	8,360	1,270	18.2

Table 4 Continued

63047	GUARDS & WATCH GUARDS	6,310	7,520	1,210	19.2
32502	REGISTERED NURSES	10,370	11,560	1,190	11.5
87202	ELECTRICIANS	5,020	6,110	1,090	21.7
31521	TEACHER AIDES, PARAPROFESSIONAL	4,370	5,460	1,080	24.7
31303	TEACHERS, PRESCHOOL	3,200	4,190	990	30.9
65041	COMBINED FOOD PREP & SERVICE	9,190	10,170	980	10.7
65026	COOKS, RESTAURANT	6,750	6,880	930	16.3
58023	STOCK CLERKS, STOCKROOM, WAREHOUSE	5,800	6,680	880	15.2
89108	MACHINISTS	4,360	5,240	880	20.2
13014	ADMINISTRATIVE SERVICES MANAGERS	3,930	4,770	840	21.4
31305	TEACHERS, ELEMENTARY SCHOOL	8,510	9,350	840	9.9
13002	FINANCIAL MANAGERS	5,920	6,730	810	13.7
13014	ADMINISTRATIVE SERVICES MANAGERS	3,930	4,770	840	21.4
31305	TEACHERS, ELEMENTARY SCHOOL	8,510	9,350	840	9.9
13002	FINANCIAL MANAGERS	5,920	6,730	810	13.7
49008	SALES REPS, NON-SCIENTIFIC EX RET	8,930	9,740	810	9.1
28108	LAWYERS	3,330	4,100	770	23.1
55338	BOOKKEEPING, ACCOUNTING CLERKS	12,820	13,580	760	5.9
43017	SALES AGENTS, SELECTED BUSINESS SERVICES	2,480	3,230	750	30.2
49021	STOCK CLERKS, SALES FLOOR	7,140	7,880	740	10.4
67002	MAIDS & HOUSEKEEPING CLEANERS	3,870	4,610	740	19.1
85302	AUTOMOTIVE MECHANICS	4,200	4,940	740	17.6
49002	SALES ENGINEERS	2,980	3,650	670	22.5
49017	COUNTER (exc) RENTAL CLERKS	2,930	3,600	670	22.9
58028	TRAFFIC, SHIPPING, RECEIVING CLERKS	7,780	8,450	670	8.6
24308	BIOLOGICAL SCIENTISTS	1,340	2,000	665	49.3
53123	ADJUSTMENT CLERKS	2,280	2,930	650	38.5
63014	POLICE PATROL OFFICERS	2,070	2,720	650	31.4
	TOTAL OF THESE OCCUPATIONS	444,298	546,748	102,458	23.1

Table 5
Occupations With the Fastest Growth (1)
Santa Clara County
1999-2006

CA OES Code	Occupation (Definitions)	Annual Averages 1999 (2)	2006	Absolute Change	Percent Change
25102	SYSTEMS ANALYSTS, ELECTRONIC DATA PROCESSING	8,760	16,210	7,450	85.0
25103	DATA BASE ADMINISTRATORS	1,700	2,970	1,270	74.7
25104	COMPUTER SUPPORT SPECIALISTS	10,650	18,310	7,660	71.9
22127	COMPUTER ENGINEERS	19,000	31,960	12,960	68.3
28305	PARALEGAL PERSONNEL	730	1,100	370	50.7
24308	BIOLOGICAL SCIENTISTS	1,340	2,000	660	49.3
66011	HOME HEALTH CARE WORKERS	980	1,420	440	44.9
32911	MEDICAL RECORDS TECHNICIANS	570	820	250	43.9
91502	NUMERICAL MACH TOOL OPERS, METAL, PLASTIC	770	1,100	330	42.9
21111	TAX PREPARERS	490	680	190	38.8
68026	FLIGHT ATTENDANTS	310	430	120	38.7
22302	ARCHITECTS, EX LANDSCAPE, MARINE	790	1,090	300	38.0
22521	SURVEYING & MAPPING TECHS	400	550	150	37.5
92953	PAINTING, REL MACH OPS, TENDERS	400	550	150	37.5
21905	MANAGEMENT ANALYSTS	710	960	250	35.2
87805	SHEET METAL DUCT INSTALLERS	890	1,200	310	34.8
13017	ENGINEERING, MATH & NATURAL SCIENCE MGRS	10,050	13,360	3,310	32.9
27308	HUMAN SERVICES WORKERS	1,530	2,030	500	32.7
98902	HAND PACKERS & PACKAGERS	4,810	6,370	1,560	32.4
34008	PUBLIC RELATIONS SPECIALISTS, PUBLICITY WRITERS	900	1,190	290	32.2
24105	CHEMISTS, EX BIOCHEMISTS	720	950	230	31.9
22121	CIVIL ENGINEERS, INCL TRAFFIC	1,170	1,540	370	31.6
63014	POLICE PATROL OFFICERS	2,070	2,720	650	31.4
32902	RESPIRATORY CARE PRACTITIONERS	510	670	160	31.4

Table 5 Continued

34035	ARTISTS & RELATED WORKERS	1,260	1,650	390	31.0
31303	TEACHERS, PRESCHOOL	3,200	4,190	990	30.9
22502	CIVIL ENGINEERING TECHNICIANS	520	680	160	30.8
89132	SHEET METAL WORKERS	1,240	1,620	380	30.6
32508	EMERGENCY MEDICAL TECHNICIANS	980	1,280	300	30.6
27307	RESIDENTIAL COUNSELORS	720	940	220	30.6
32314	SPEECH PATHOLOGISTS, AUDIOLOGISTS	490	640	150	30.6
66005	MEDICAL ASSISTANTS	2,100	2,740	640	30.5
32511	PHYSICIAN'S ASSISTANTS	330	430	100	30.3
43017	SALES AGENTS, SELECTED BUSINESS SERVICES	2,480	3,230	750	30.2
87317	PLASTERERS & STUCCO MASONS	910	1,180	270	29.7
34005	TECHNICAL WRITERS	1,830	2,370	540	29.5
27105	URBAN & REGIONAL PLANNERS	510	660	150	29.4
85323	AIRCRAFT MECHANICS	310	400	90	29.0
32518	PHARMACY TECHNICIANS	590	760	170	28.8
27102	ECONOMISTS, INCL MARKET RESEARCH ANALYSTS	520	670	150	28.8
25108	COMPUTER PROGRAMMER AIDES	1,050	1,350	300	28.6
53123	ADJUSTMENT CLERKS	2,280	2,930	660	28.5
15017	CONSTRUCTION MANAGERS	1,950	2,500	550	28.2
53808	BILL & ACCOUNT COLLECTORS	1,790	2,290	500	27.9
53805	HOTEL DESK CLERKS	760	970	210	27.6
21908	CONSTRUCTION & BUILDING INSPECTORS	400	510	110	27.5
21508	EMPLOYMENT INTERVIEWERS, PRIV OR PUB	620	790	170	27.4
87102	CARPENTERS	6,630	8,430	1,800	27.1
93111	ELECTROMECHANICAL EQUIPMENT ASSEMBLERS, PRECISION	2,160	2,740	580	26.9
24502	BIOLOGICAL, AGRICULTURAL, FOOD TECHS	450	570	120	26.7
	TOTAL OF THESE OCCUPATIONS	106,330	156,720	50,390	47.4